The Story of the 286

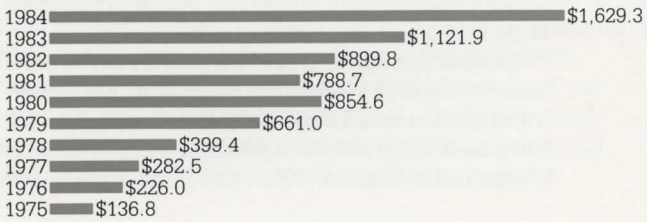
COVER:
These people symbolize the thousands of Intel employees who have been or are currently involved in the design, production, marketing and support of the 286 microprocessor. The 286 is expected to play a key role in Intel's revenues for many years to come.

Financial Highlights

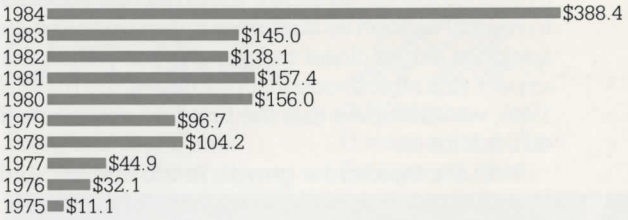
(Dollars in thousands—except per share amounts)		1984	1983	Percent Change
Net revenues		$1,629,332	$1,121,943	45%
Income:	Before taxes	$ 298,149	$ 178,455	67%
	Net	$ 198,189	$ 116,111	71%
	Per share	$ 1.70	$ 1.05	62%
Return on revenues:	Before taxes	18.3%	15.9%	
	Net	12.2%	10.3%	
Return on average equity		16.0%	13.9%	

See page 26 for a description of our industry segment reporting.

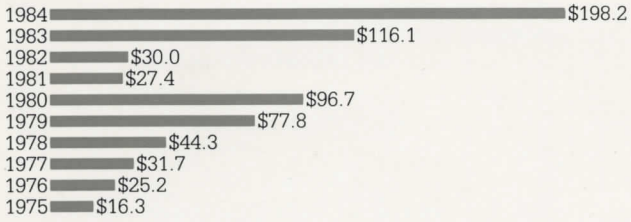
Net Revenues
(Millions)



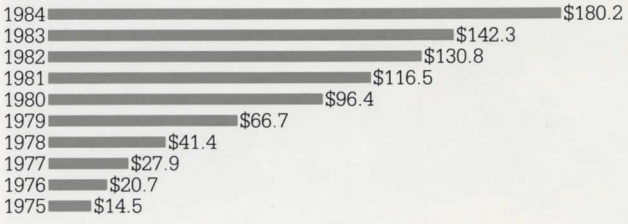
Capital Additions
(Additions to Property, Plant and Equipment) (Millions)



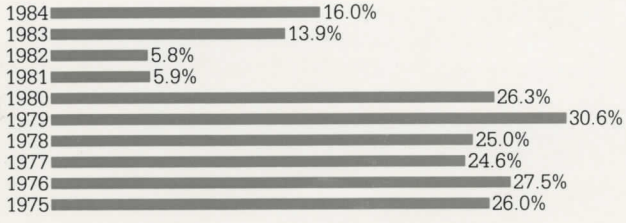
Net Income
(Millions)



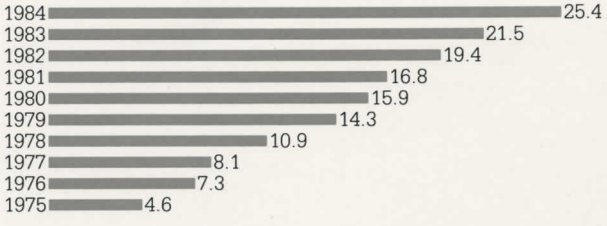
Research & Development
(Millions)



Return on Average Equity



Employees
(At Year End) (Thousands)



Both revenue and earnings hit record levels in 1984. Revenue grew 45% and earnings were up 71% compared to the previous year. Net income included a one-time $19.3 million reversal of deferred tax on prior years' income of Intel's Domestic International Sales Corporations (DISCs). The Tax Reform Act of 1984 provides for forgiveness of such deferred tax for the years 1972–84.

Unfortunately the year ended on a down note. Revenue for the last quarter was down 4% from the third quarter and earnings dropped to $0.20 per share, about half as much as for the corresponding quarter of the previous year.

The extremely strong market for semiconductor devices that Intel enjoyed through the first half of the year collapsed near year-end as the rate of economic growth slowed. Customers, who earlier in the year had been stockpiling Intel products that were in short supply, stopped buying as they re-evaluated their short-term needs and found themselves with too much inventory. This was especially the case among makers of personal computers and other office automation equipment. Our order rate slowed to a level well below shipments, order cancellations rose, and many orders were rescheduled for later delivery.

It will probably take several months for this correction to run its course. Assuming continued overall economic strength, the order rate should return to normal as soon as customer inventories and supplier backlogs shrink closer to normal levels. While we expect this shift to occur sometime in the first half of 1985, we anticipate that the first two quarters will be difficult for us.

Both the rapid order growth in the first half and the cancellation and rescheduling of orders in the second half were heaviest in microprocessors and related components. Even with the cancellations, this was our greatest growth area, and we continue to be the world's largest manufacturer of microprocessors.

Intel's newest microprocessors have been incorporated into the next generation of equipment now being brought to market by our customers. Our 80286 microprocessor runs software written for Intel's earlier microprocessor family at significantly higher speed and offers new features, such as memory protection and virtual memory capability, which are important in new generation office products, including personal computers. The value of Intel-supplied components in the new machines is significantly higher than before. We expect the 80286 and related products to continue to be a major growth area for Intel.

Other component product areas proved to be less volatile than microprocessors this year. These products are used in industrial, telecommunications, automotive and military electronics applications. These are excellent growth markets and we feel our product position in these areas is exceptionally strong.

Sales of our systems products were essentially flat in 1984. While we have a strong position in microcomputer development systems sold to engineers developing products based on our microprocessors, sales of these systems were limited by competition from both large and small computer systems.

Sales of our System 310, a general purpose OEM microcomputer system introduced in 1983, didn't increase as fast as expected. As a result, we reduced the size of our systems manufacturing operations in Oregon and Arizona. While the initial growth ramp for

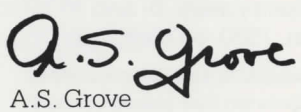
the System 310 hasn't been as rapid as we would have liked, we think it is an excellent product that will continue to gain acceptance in the coming years.

1984 was a year of heavy investment for us. Capital spending was more than twice that of any previous year with $388 million spent on facilities and equipment. High levels of capital investment are necessary to remain competitive in our rapidly moving industry, which is driven by improvements in the technology and by the need to expand production in concert with demand. We have significant additional production capacity at various stages of completion. Fab 7 in Rio Rancho, New Mexico, is in the early stage of expanding production after a slow start. It is the world's first plant processing 6-inch diameter silicon wafers, which produce about twice as many chips per wafer as 4-inch diameter wafers. The plant experienced an unusual number of start-up problems that have delayed full operation by several months. As the year ends, Fab 7 is still operating below our expectations but it is continuing to improve. Fab 8 in Jerusalem, Israel, is scheduled to start production in 1985 and Fab 9, also in Rio Rancho, will provide additional production capacity in 1986. We expect to continue a high rate of capital investment in 1985.

Investment in new technology and product development also hit an all-time high. R & D grew 27% to $180 million, or 11% of revenue. We measure the success of this investment and of those made in previous years by the contributions of new products to Intel's growth, and by our ability to remain a competitive market participant. In 1984, Intel introduced about 70 new products, many of which we expect to be important in our future growth. Intel's commitment to high-performance CMOS, or CHMOS as we call it, bore fruit in 1984 with products introduced across much of our product line, including the 51C64 and 51C256, the world's first CHMOS dynamic RAMs, as well as EPROMs, peripheral circuits, and a new family of digital telecommunication functions. During the last quarter, about 15% of our total production capacity was devoted to CHMOS.

An important trend in distributed computing is the growth of networking. We view this as a significant opportunity and have actively participated at several levels. Demand for our 82586 local area network (LAN) coprocessor, which supports Ethernet, continued to grow, and we announced several new products for other LANs, including chip support of STARLAN for local networking over telephone wires and a commitment to the Manufacturing Automation Protocol (MAP) for factory automation. In addition, we introduced BITBUS,™ a proprietary serial communication technology for industrial applications.

The new year is beginning with considerable uncertainty in the marketplace. 1985 presents a challenging environment that will require flexibility and responsiveness on our part. We are buoyed by our confidence in the long-term growth potential of our industry and by the knowledge that our product position is better than it has ever been. We are confident that the Intel team is up to the challenge.



A.S. Grove
President and Chief
Operating Officer

G.E. Moore
Chairman and Chief
Executive Officer

Gordon E. Moore (left) and Andrew S. Grove

Intel is a manufacturer of electronic "building blocks" used by Original Equipment Manufacturers (OEMs) to construct their systems. Intel's strategy is to offer OEMs a wide range of solutions to their needs, and to offer these solutions at component, board and system levels. Following are brief profiles of the principal products Intel provides.

Microprocessors

Function. A microprocessor is the chip that constitutes the central processing unit of a microcomputer-based system. The microprocessor directs the manipulation of data in the system, controlling input, output, peripheral and memory devices.

Intel Position. Intel introduced the first microprocessor in 1971, and is the world's largest manufacturer of microprocessors. In 16-bit architecture microprocessors, an advanced portion of the market, the share for Intel architectures has increased more than 10% this year in spite of intense competition from other microprocessor manufacturers.

1984 Developments. Intel's new 8- and 16-bit microprocessors, the 80188, 80186 and the 80286, entered high volume production in conjunction with unprecedented customer demand. Even though production of the 186 tripled each quarter, the steepest ramp for a product in Intel's history, demand continued to outstrip availability throughout much of 1984.

Market Data. 1984 industry sales, 8- and 16-bit microprocessors: $568 million. 1980–84 compound annual growth rate: 61.5%.*

**Dataquest*

Microprocessor Peripherals

Function. Peripheral components include special purpose microprocessors that manage either input/output or system functions. For example, the 82586 LAN coprocessor handles the communications and low level software for a local area network. Peripheral controllers perform specific tasks, such as control of floppy disks, Winchester disks, keyboards, or dot matrix printers. By handling specific tasks very efficiently, peripherals reduce the burden on the central processing unit and enhance total system performance.

Intel Position. Intel offers 59 VLSI peripheral components, the broadest selection of such products in the industry. These products were developed to provide microsystem designers with a set of building blocks designed to operate together and provide optimum system level solutions.

1984 Developments. Intel continues to play an active role in the evolution of local area networks. Intel has been an active participant within the Institute of Electrical and Electronic Engineers (IEEE) in working to establish several local area network standards; multiple standards are required to meet wide ranging application needs. These standards include Ethernet, Cheapernet, IBM's PC Network, and STARLAN. Intel is currently the only supplier with VLSI to support all of these standards. Introduced late in 1984 was the 82588 high integration personal workstation LAN controller, which can be used to implement both the IBM PC Network and the STARLAN protocol. The 82586 LAN coprocessor, now in volume production, is rapidly becoming the industry standard for high performance networks.

Market Data. 1984 industry sales, microprocessor peripherals: $880 million. 1980–84 average annualized growth rate: 35%.*

**Intel estimate*

Memories

Function. Memory components are used to store computer programs and data entered during system operation. Non-volatile memories retain data when system power is shut off, while volatile memories do not. There is a variety of types of memory components within the two categories: users select among them by evaluating price/density/functionality trade-offs to arrive at the right choice for a specific application.

Intel Position. Intel is among the world's largest manufacturers of Metal Oxide Semiconductor (MOS) memory devices, and is also the largest producer of high density magnetic bubble memories. The company manufactures eight types of volatile and non-volatile memory components, and also produces the FAST 3825, a semiconductor-based memory system used with mainframe computers.

1984 Developments. During 1984, Intel announced the world's first 256K CHMOS dynamic RAM. It is felt by many that CHMOS will be the mainstream technology for producing DRAMs in the late eighties. Also, the company produced large quantities of the integrated RAM, a special memory for microprocessors that offers many features equivalent to conventional static RAM but at a significantly lower cost.

Market Data. 1984 industry sales, MOS semiconductor memories: $6.5 billion. 1980–84 average annualized growth rate: 27%.*

**Dataquest.*

Microcontrollers

Function. On one chip, a microcontroller has a central processing unit, random access memory, program memory, and input/output circuitry. This product is used in industrial control for robotics and instrumentation; in communications for phones and modems; in computers for keyboards and peripherals; and in consumer products for automobile engine control and home video.

Intel Position. Intel introduced the first 8-bit microcontroller in 1976, and is the largest manufacturer of this type of microcontroller. The Intel MCS®-48 family of microcontrollers, which is also manufactured by several other companies, has been the key 8-bit microcontroller architecture in the industry since its introduction.

1984 Developments. In 1980, Intel introduced a more powerful 8-bit microcontroller family, the MCS-51. This family became the key high-end microcontroller architecture in 1984. MCS-51 production volume was four times higher than in 1983. In addition, Intel's third generation MCS-96 microcontroller family moved into production. This highly integrated 16-bit microcontroller will set a new standard for microcontroller performance and cost effectiveness.

Market Data. 1984 industry microcontroller unit shipments are expected to reach 335 million, up from 265 million units in 1983. Unit shipments double approximately every 2 years.*

**Dataquest*

Software

Function. Software is the set of instructions that must be written to direct a microcomputer-based system to perform specific tasks.

Intel Position. Intel offers an extensive selection of operating systems, high level languages, and development and debug support for OEMs incorporating Intel microprocessors or microprocessor-based systems into their end user products.

1984 Developments. Intel announced iRMX™ 86 R.6, which supports 80186/188 and 80286-based systems, allowing OEMs to take advantage of the faster speed of Intel's newest microprocessors and boards without having to change application software. Also introduced was MS-DOS,* which runs on both the 8086-based and 80286-based models of the System 310. Intel will announce a version of the Unix** System V operating system for the 286 in January 1985. Third party software is becoming increasingly important in support of Intel's architecture; in 1984, Independent Software Vendors (ISVs) produced over fifty software packages designed to run on 286/310 microcomputer systems.

Market Data. 1984 industry sales, microcomputer software: $3.3 billion. 1981–84 average compound growth rate: 79%.***

**MS-DOS is a trademark of Microsoft, Inc.*
***Unix is a trademark of Bell Laboratories*
****Software Access*

Microcomputer Systems

Function. OEM microcomputer systems and single board computers incorporating many Intel components are now widely accepted as basic building blocks for technical and commercial applications. Intel's customers have increasingly focused their efforts on their own unique value-added by taking advantage of these higher levels of integration.

Intel Position. Intel continues to gain market share in the single board computer market, where a significant portion of the worldwide market has chosen our MULTIBUS® I bus architecture standard. The 310 family of integrated microcomputer systems won more designs in 1984 than any other Intel system product. Unit shipments surpassed all previous Intel system products.

1984 Developments. Specifications for MULTIBUS II, the next generation industry standard bus, were introduced, preparing for an early 1985 introduction of initial MULTIBUS II single board computers. The 286/310 -40, -41 integrated systems and Data Base Information System iDIS™ 715 were announced and shipped. They offer increased Winchester storage, eight-user capability and support for iRMX real time as well as XENIX† interactive applications.

Market Data. 1984 industry sales, single board computer* and OEM microcomputer systems**: $4.8 billion.•

**Gnostic Concepts*
***infoCorp*
†XENIX is a trademark of Microsoft, Inc.
•Industry growth data not available.

Development Systems

Function. Engineers use microcomputer development systems to develop and debug the hardware and software for systems based on Intel microprocessors.

Intel Position. Intel is the world's largest manufacturer of microcomputer development systems and in-circuit emulators, and provides a complete line of integrated development tools focused on increasing the productivity of design engineers.

1984 Developments. The Series IV development system and I^2ICE,™ an advanced in-circuit emulator, began shipping in volume in 1984.

Market Data. 1984 industry sales: $1 billion.* 1980–84 average annualized growth rate: 25%.**

**Prime Data*
***Intel estimate*

THE STORY OF THE 286

If you asked a group of lay people to imagine how a major semiconductor company goes about developing a new microprocessor, they would probably conjure up high-tech images of white-frocked technicians sitting calmly in brightly lit rooms, consulting their clipboards while turning knobs on control panels full of blinking lights.

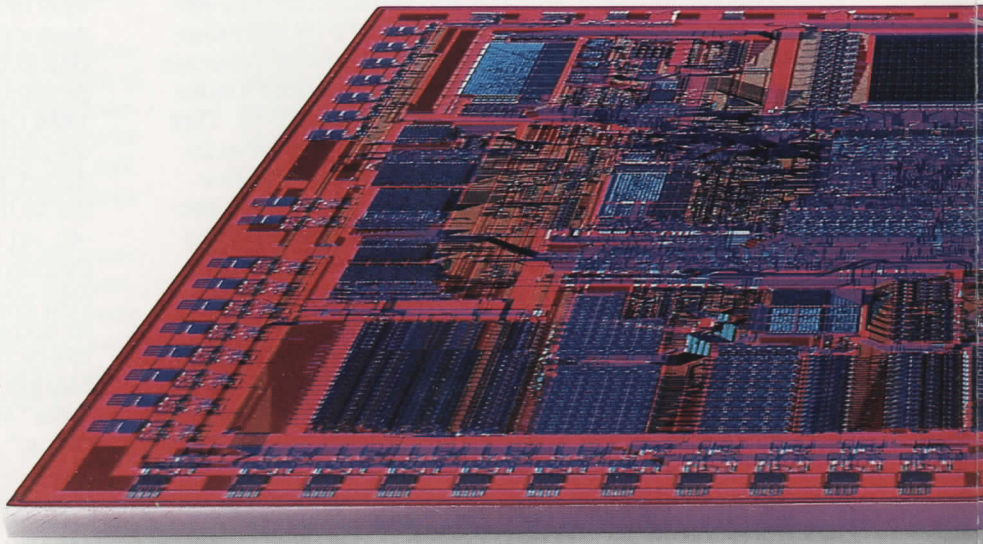
In one sense, the core of that vision is correct, since creating a new VLSI product requires highly trained people, scores of man years and extremely sophisticated—and extremely expensive—equipment.

But as the story of the 80286 microprocessor at Intel demonstrates, being at the cutting edge of VLSI technology also requires intangibles that go well beyond hiring the brightest engineers and buying the newest design tools—though Intel certainly has more than its share of both.

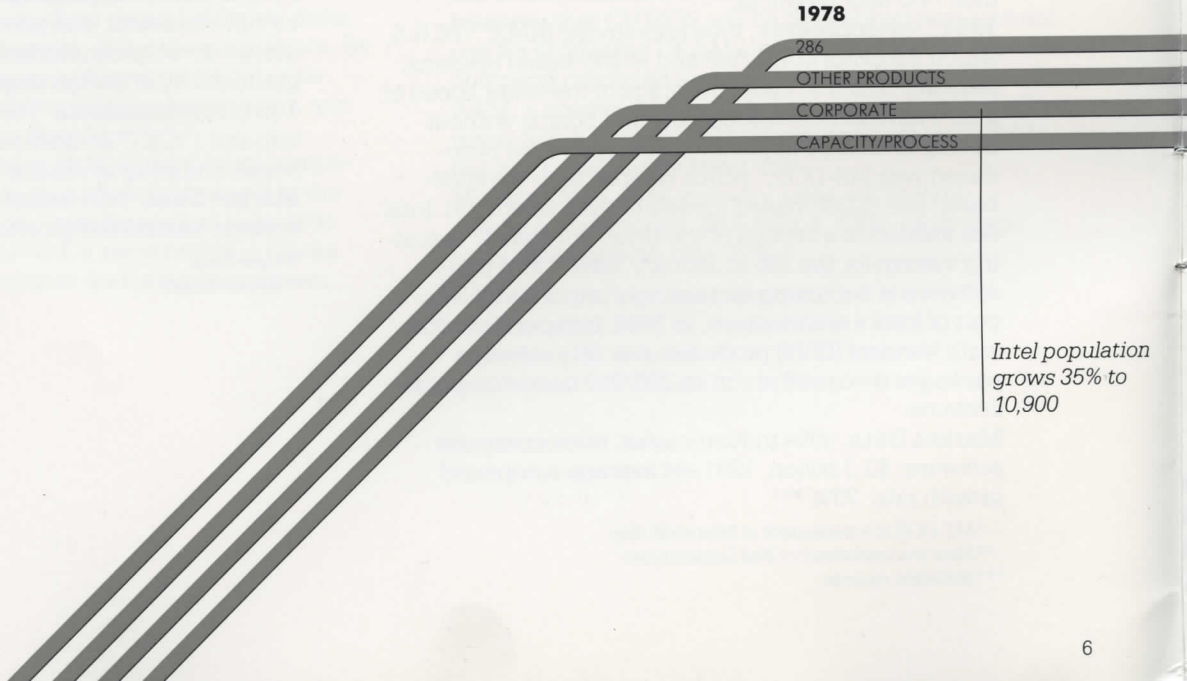
What's also needed is the willingness by both the company and its employees to take chances, the ability to make intelligent decisions in what is often a crisis atmosphere, the capacity to recognize a problem and then quickly respond to it, and the commitment to put in some very hard work.

Old fashioned foresight, coolheadedness, tenacity—those, as much as all the high-tech whizzies, are the key elements in the story of the 286. And in this annual report, we tell the roles they played in bringing the 286 to life.

The tale of the 286 is a story that has SWAT teams and a recipe box that was put to some distinctly non-culinary uses.



This year's annual report tells the story of Intel's 80286 microprocessor. While this complex, multi-year project was underway, many other projects were also happening at Intel, as the following time lines make clear. They show the major events of the 286, as well as other key product introductions, additions to the company's capacity and important corporate events occurring in the 1978–84 time frame.



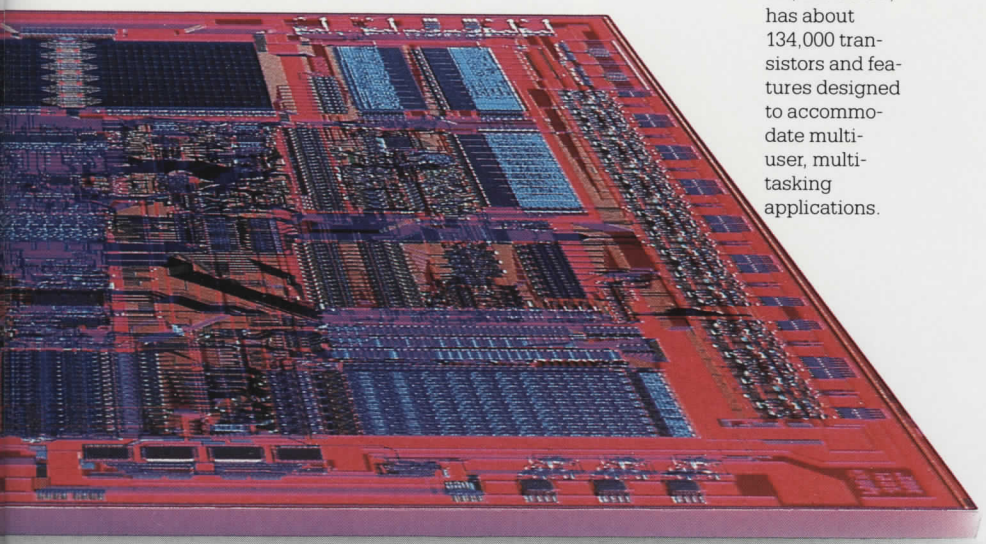
During 1985, millions of Intel's most advanced microprocessor, the 80286, will be sold, finding their way into personal computers, robots, computer-aided design stations and scores of other applications. As that happens, untold numbers of people will experience—and probably quickly take for granted—an entirely new level of semiconductor performance. As a consequence of its enthusiastic acceptance in the marketplace, the 286 is expected to play a key role in Intel's revenues during this coming year, and for many years to come.

By any standard, the device is a stunning technological and financial success. But its ultimate triumph was not always foreseen during the five years it took to develop the chip. During that long process, the 286 experienced its share of snags. In fact, there were times when some people at Intel wondered if it would ever get out the door...

Work on the 286 project began in 1978. At that time, Intel's flagship microprocessor was the 8086. While only a year old, the 8086 already had a number of important design wins, and was holding its own in a competitive marketplace, with products offered by Motorola and Zilog the chief competition. Both of those companies had new products on the drawing board, and it was time for Intel to begin thinking about a successor to the 8086.

"The competition is always nipping at your heels," said George Alexy, who worked on the 286 in those early days of the project. "You're constantly moving forward. When a product hits the market, you say 'Now that this one is behind us, where do we go from here?' "

A small team, working out of Santa Clara, was assembled to answer that question. Its concerns were the same as those for planners at any company in the early stages of bringing a new product to market. *What do our customers want today, and what will they be wanting five and ten years from today? What is the*



Intel's most advanced microprocessor, the 80286, has about 134,000 transistors and features designed to accommodate multi-user, multi-tasking applications.

Formation of small multidisciplinary team to begin planning 286

Visits to 50 customers to seek input on features needed for 286

8086, 16-bit microprocessor introduced

Fab V opens in Aloha, Oregon

286 "wish list" put together—a list of desired features

5-for-4 stock split announced

32K EPROM (Electrically Programmable ROM) announced

most complex product we can develop, given the current state of our technology and the resources of our company? How complex can we make the product and still manufacture and sell it at a profit? How do we anticipate and deal with the production technology and competition that will exist when we have completed the product?

"Knowing that interest in the product was nearly feverish, he tried sneaking in a back door... 'But I was too late; the lab was mobbed,' he said. They weren't exactly people you could chase out—there were people like general managers in there."

As a start, Alexy and the others drew up a list of features they thought the new chip should include. Since they also wanted to stay on top of the marketplace, they visited dozens of companies—small, innovative companies and the biggest names in data processing, I/O control, robotics, industrial control and other applications that would eventually use the chip.

"We'd go in teams," he said. "A marketing guy, an applications person, maybe a design engineer or a computer systems architect. We'd get together with their planning people and their engineering people. We'd ask them, 'Where are you going with your products? What kind of features do you need in a microprocessor to support that direction?' "

Those field visits went on for six months. What emerged from them, and from countless in-house discussions, was a kind of "286 wish list." Of course, not everything on the list would end up on the chip, and there were some spirited discussions about what to include and what to cut.

"It was a real stormy time," said Jim Slager, who was the first person to work full time on the 286 and who eventually supervised its logic design. "It was about as controversial as a product could

286 design engineers Jim Hudson (standing) and Dave Ferguson in the Design Engineering Lab in Santa Clara. Jim and Dave's responsibility is to work on yield and performance improvements on the 286.

Intellec® Series II Development System introduced

Memory Component Division moves to Aloha, Oregon

HMOS (High Speed Metal Oxide Semiconductor) technology upgraded to HMOS II, with an additional speed improvement of over 30%

286 Product Requirements Document complete. Estimates on potential market size and needs completed.

Intel joins Fortune 500 as #486

One million-bit bubble memory and support components introduced

1979

286

OTHER PRODUCTS

CORPORATE

CAPACITY/PROCESS

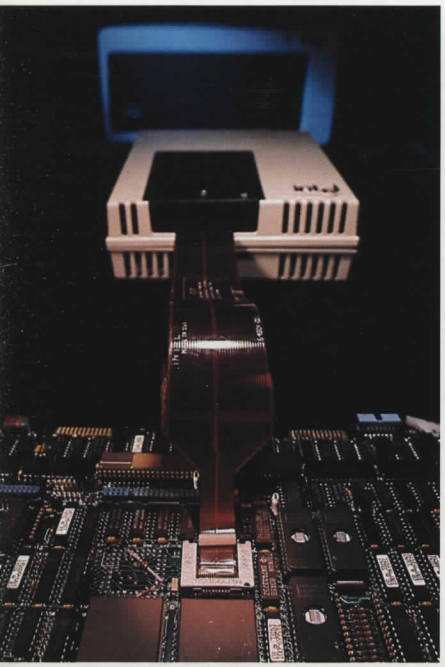
be. We had product planning meetings with shouting and all kinds of confrontations. Since a device like that is so central to Intel, all the other divisions had something to do with it. The software people wanted to have something to say. The systems people were going to be building boards, so they wanted to know about the data bus. All of the peripherals people were there, since they were going to be developing support chips."

What emerged from the wars of words over the 286 was a "Product Requirements Document" that spelled out what the chip would do, how it would do it and who would buy it.

First, it was decided that the new microprocessor would be compatible with the 8086, meaning that 8086 software would run, without modification, on the new device. The 286 would also be at least three times faster than the 8086. There would be a comprehensive protection system on the chip to protect against inadvertent or deliberate tampering. A "virtual memory" feature would allow it to have direct access to a huge amount of memory. And to further increase performance, its architecture would be "pipelined," so that, for example, when one part of the device was executing an instruction, the next instruction was being loaded in.

The Product Requirements Document for the 286, along with its other planning materials, contained hundreds of pages of text, tables and charts, describing every conceivable use for the new chip, from medical instrumentation devices to telecommunications terminals. But in an indication of the incredible pace of change in the semiconductor industry, not to mention what happens to the best-laid plans, the personal computer—which would eventually become its biggest user—wasn't mentioned *once*.

To build a house, the future homeowners must first tell an architect the sort of home they'd like to live in. That description is then translated into an architect's rendering, and then into a set



Intel's Integrated Instrumentation and In-Circuit Emulation (I^2ICE) System aids engineers in developing and debugging the hardware and software for the systems they design based on our 16-bit microprocessors, including the 286.

Designed for high-performance applications, the 80286 is approximately three times as fast as the 8086, and offers a memory capacity 16 times that of the 8086 for applications that require holding large amounts of data in high-speed memory.

Engineering Design Center established in Japan

Intel operations begin at Hillsboro, Oregon (Hawthorn Farm) and Deer Valley, Arizona

Engineers begin work on electrical design of 286

Stock splits 3-for-2

8088 announced —8-bit bus version of 8086 microprocessor

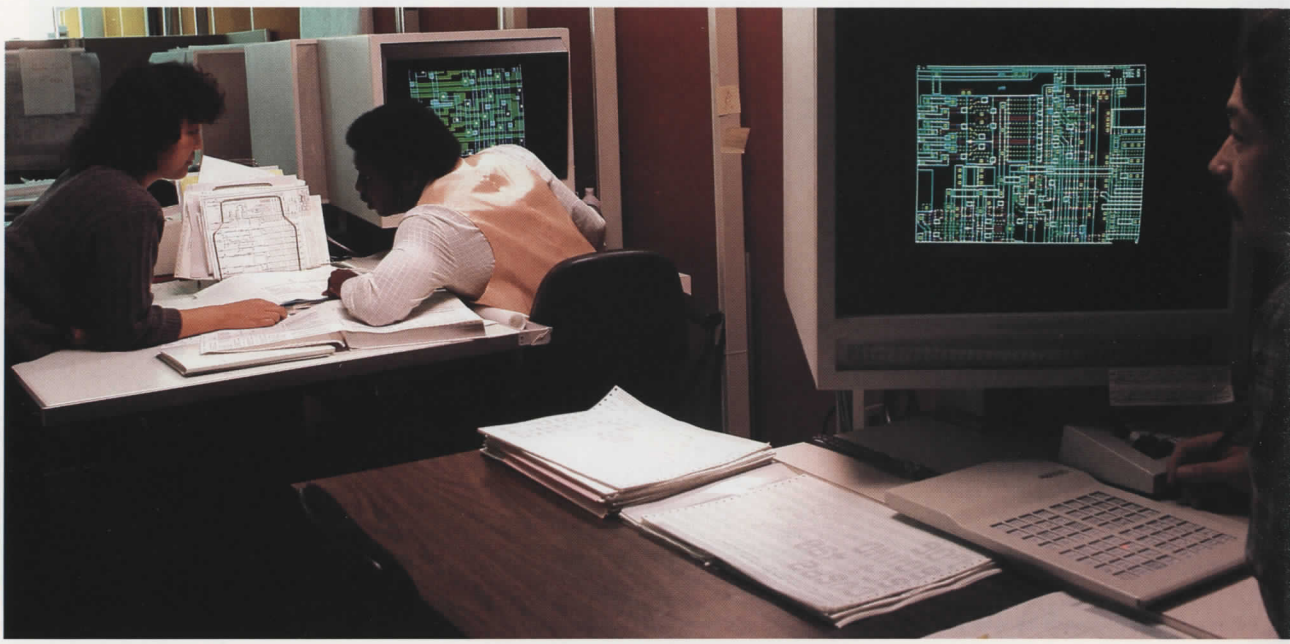
of blueprints, and finally into a set of specific drafting instructions used for the actual construction.

That same process of going from a general description to detailed plans takes place with microprocessors. Logic designers take a product description and sketch how the different parts of the chip will work. Their schematics are then fleshed out by circuit designers, who lay out the "logic gates" that will bring the schematics alive. Finally, mask designers convert those gates to geometric patterns to produce a kind of computerized stencil that will be used to manufacture the chip.

An architect's building blocks include wood, steel and stone; the building block used by chip designers is the transistor. There are about 29,000 of them on the 8086. When the design of the 286 began in July, 1979, the task before the design team was a "simple" one: figure out how to assemble over a hundred thousand transistors in a way that would implement the Product Implementation Plan, and then fit them in a space the size of a baby's fingernail.

About two dozen people were assembled to do the job. They came from all over the world, and many were working together for the first time. Any VLSI (Very Large Scale Integration) product has obstacles, delays and bugs, and like many tasks at Intel, work on the 286 involved long, high-pressure days and many months with little apparent progress. But this particular chip was, far and away, the most complex microprocessor Intel had ever built. A recurring theme of the design process was that engineers were being asked to do a job for which no precedents and few guidelines existed. (They would also have the misfortune of having to do their major work during the company-wide belt tightening, and the accompanying strain on staff resources, that marked the massive recession of the early 80's.)

But they set out nonetheless. Four senior logic designers were



Layout designers Kathy Eng, Dave Robinson (background) and Allen Dixon use computer-aided design (CAD) technology to make engineering changes on the 286 design.

1980

286

OTHER PRODUCTS

CORPORATE

CAPACITY/PROCESS

Intel sells $150 million of 7% convertible subordinated debentures, marking the first time the company has gone to the public capital market for funds since the initial public stock offering in 1971.

Ground breaking for new wafer fabrication facility in Albuquerque, New Mexico

8087 floating point math coprocessor introduced

Systems assembly facility in Puerto Rico opens

8051 advanced 8-bit microcontroller announced

Computer-aided drafting work complete on physical layout of 286 mask set.

Intel, Xerox and Digital Equipment Corporation announce a joint project to develop specifications for a local area communications network, based on Xerox's Ethernet approach.

2816 E^2PROM (Electrically Erasable PROM) introduced

each assigned to separate parts of the machine, each working with a set of circuit and mask designers. They began creating the 286, traveling down a road that would occasionally be very rough.

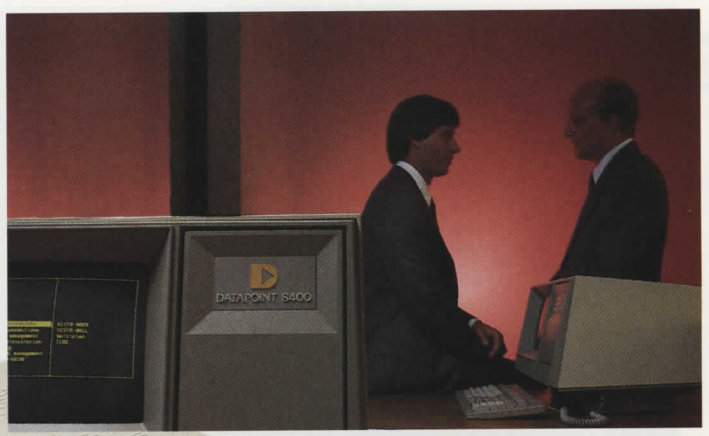
"It took four days to sort things through. But then suddenly—boom!—a big breakthrough. It started to work! We were getting something. People were elated. It was, you could say, a peak experience."

Recalls Slager, "At least once a year, we went through a crisis that made us wonder whether we would get there or not. One of them was the chip size crisis. At one point, it looked like the chip could be as big as 340 mils on a side. (*The 8086 was 227 on a side.*) That was so big that people outside the design team would roll on the floor laughing. They kind of enjoyed our misery. Chip designers love to hear that someone else's chip is too big, but when it happens to you, it's really serious stuff."

Gene Hill, who was in charge of the entire design project, said that because of the sheer complexity of the task, the computers on hand for the 286 were frequently not adequate for the job. The team had difficulties, for example, running a key software tool called the Continuity Verification System, or CVS. Written by Intel's Todd Wagner, the novel program checks to make sure that the work of the mask designers matches what the circuit designers intended.

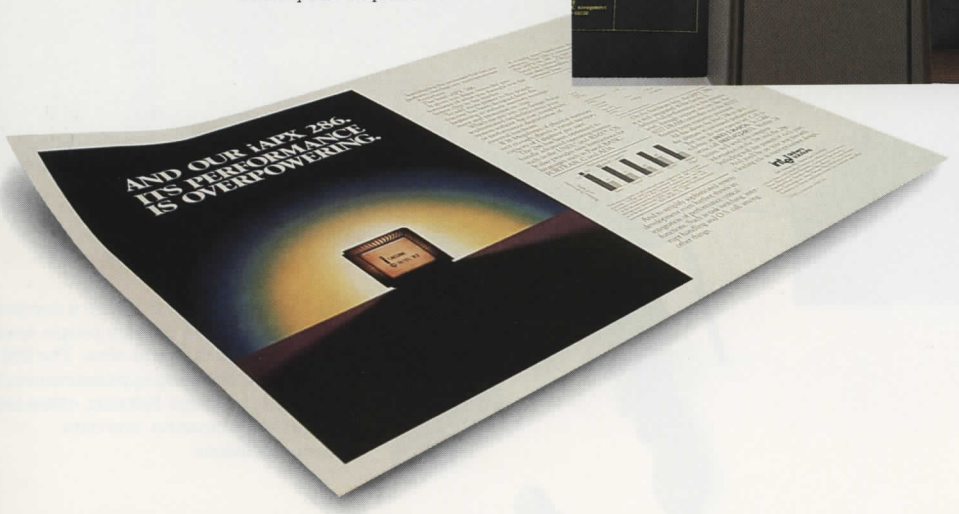
"To run CVS for the 286 through the computer took from four to six days," said Hill. "The problem was that the disk drives on the computer would typically fail about once every three days. They'd lose something important. It took us three months to solve the problem and until we did, we never knew if the chip was hooked up right or not."

As a result of these and other misfortunes, the design process dragged on longer than had originally been planned. But there

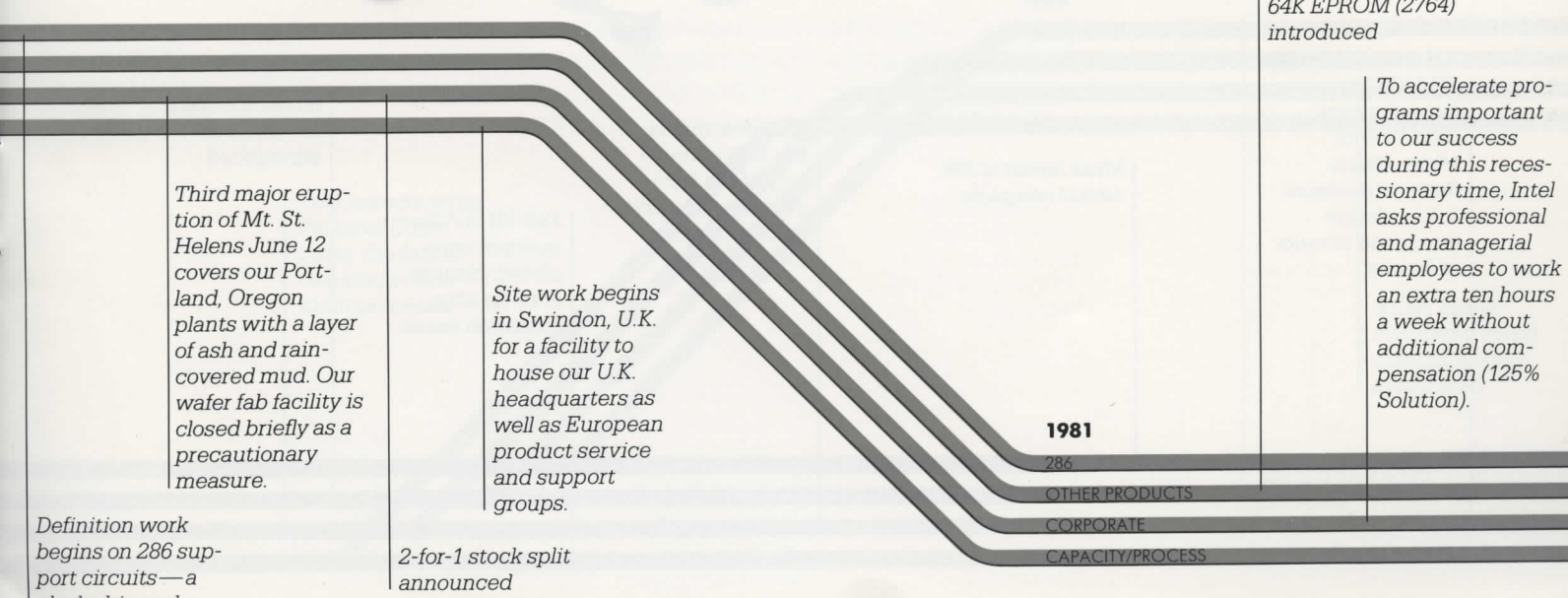


Neal Longwill (left), Intel field sales engineer, discusses Datapoint's VISTA-STATION-84* with Ken DeBacker, director, Datapoint workstation and processor development. This applications processor incorporates the 286 and is designed to perform data processing functions and office automation tasks such as word processing, electronic mail and financial modeling.

*VISTA-STATION-84 is a trademark of Datapoint Corporation.



One spread of a five-page advertisement that generated over 10,000 inquiries; part of Intel's campaign to generate design wins for the 286.



were days without crises, when everything worked correctly. And as the project wore on, there were more good days than bad ones. Day by day, month by month, more of the chip was designed, simulated and debugged into working order.

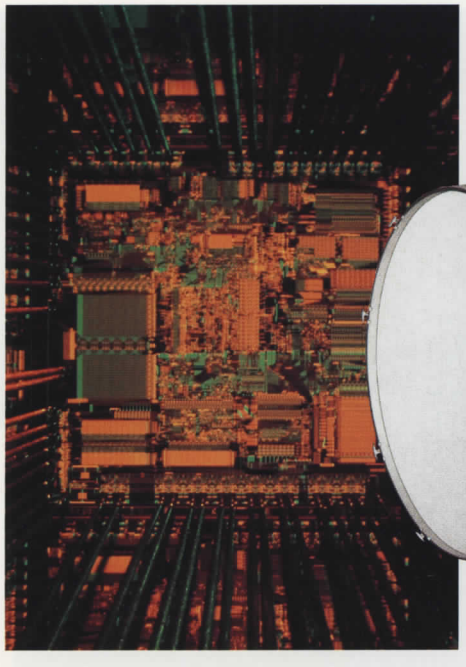
"It was a real stormy time. It was about as controversial as a product could be. We had product planning meetings with shouting and all kinds of confrontations."

In the process, the design team was filling up a computer data base that contained a complete description of the "masks" that would eventually be used to manufacture the chip. But the 286 was so big that the data base describing it wouldn't fit into one computer system. In the end, four different computers were used. To keep track of everything, a technique was borrowed from a more domestic application.

"We literally had one guy whose full-time job was to keep this recipe box full of index cards," said Hill. "And he had to run around much of the day to keep track of which data bases were in which locations. We also had programs running on nearly every mainframe Intel had in California, Oregon, and Arizona. Networking was a nightmare."

In the Spring of 1982, the design team finished its first rough draft of the 286, and the first sample chips were manufactured at Intel's Livermore, California fabrication plant. What for four years had been nothing but an idea, and then a collection of documents, and then a stack of circuit designs, and then a huge collection of polygon coordinates in a set of computer data bases, was now an actual, physical object.

Slager drove to Livermore to pick up the first 286 wafers. Knowing that interest in the product was nearly feverish, and hoping to avoid a mob scene back in Santa Clara that would prevent his team from getting to work, he tried sneaking in a back door when



Over 68 tiny probes are used to test an individual 286 circuit.

The 286 is designed to power a computer system that works the way people work—juggling many things at once. The 286 can address multitasking applications such as multi-user business systems, office and industrial automation, and data communications.

CIMATEL is formed, a joint venture with Matra-Harris Semiconducteurs, S.A. to design integrated circuits in France.

Mask layout of 286 circuit complete

This year marks the 10th anniversary of the introduction of the first microprocessor, the Intel 4004.

Fab VII in Albuquerque completed; plant to start up after recession eases.

80130, a software-in-silicon device announced

he returned.

"But I was too late; the lab was mobbed," he said. "There were thirty people standing around watching every move we made. But they weren't exactly people you could chase out—there were people like general managers in there. Everyone wanted to see what the chip was going to do.

"So we started testing. But we couldn't make it work. The tester wasn't working right, or the substrate bias wasn't right, or something. So we fiddled with it for a couple of hours, until all those people standing around left.

"It took four days to sort things through. But then suddenly—boom!—a big breakthrough. It started to work! We were getting something. People were elated. It was, you could say, a peak experience. We had a big computer listing on the wall, and we would write our results on it for everyone to see. We'd write: 'We have run 17 clock cycles of diagnostics—found this mistake. Then, 'Ran another 30 clocks—found this mistake.' After the fourth day, it wasn't 17 or 30. It was 5,000. Then 10,000. They were great results."

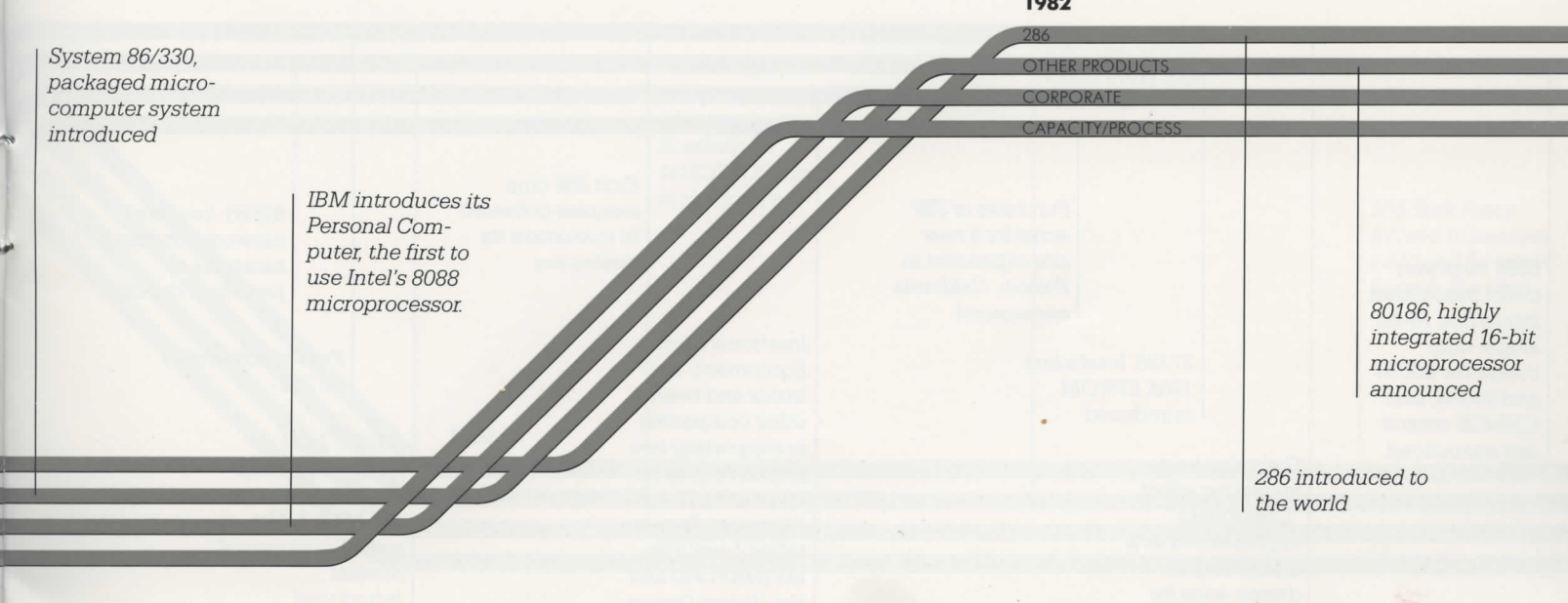
Of course, there were problems with the chip at that point; there inevitably are. But the design team methodically worked to eliminate them.

"It seemed like everything was great," said Slager. "The chip did everything people asked it to do. We were really happy. It was one of those times when you really feel wonderful about things. People started moving onto the 386 (*the successor to the 286*). It seemed like the 286 was a finished, closed story that just needed a little bit of cleanup, and it would be done."

Unfortunately, that was not to be the case.

"It just kind of froze in that state," he sighed. "The chip was already late ... and time just ticked by. Progress just seemed to drop to a snail's pace."

The 286/310 Microcomputer System serves as an advanced "computing engine" to which OEMs (Original Equipment Manufacturers) add their proprietary applications software to produce a broad variety of systems for specific purposes.



Some time around 1979, IBM decided to market a personal computer, and chose Intel's 8088 microprocessor as the brains of the device. While one of the most significant design wins in Intel's history, it happened with little prior contact between the two companies. The situation would be different when IBM began work on its second generation personal computer, called the PC AT.

"In June of 1982, I was called by our salesman in Fort Lauderdale," said Dorothy Cloud, a Product Marketing Engineer who works in Intel's Microcomputer Group. "He said that IBM-Boca Raton wanted to talk to Intel about our future microprocessors. So IBM sent a team out. There were only five of them. But we must have had 25 people in the room—design engineers, product marketing engineers, customer marketing engineers and a few management people. This was the first time that IBM actually came to Intel to get design support. We gave them some hard information on the 286, gave them our schedules, and committed to provide them with early samples and whatever support we could. We did the same thing for other major customers."

"At least once a year, we went through a crisis that made us wonder whether we would get there or not."

As a result of that meeting, Intel realized that the world's largest computer maker was keenly interested in a product that was struggling into production. At the time, the 286 had its share of small bugs and speed problems that plague all ICs shortly before completion; for example, the testing program was behind schedule. That meant that while the company could manufacture tens of thousands of copies, it would have no way of knowing which of them worked.

Intel's management decided that to get the project on-track, nothing short of a major, inter-departmental task force would suffice. Jean-Claude Cornet, who was managing Intel's joint venture

The Foxboro Company's SPECTRUM* Command Center is based on the 286 and is optimized for real-time process control applications such as a paper mill. This system's panel allows an operator to access quickly process data and respond to changing conditions in a plant.

*SPECTRUM is a trademark of the Foxboro Company.

8096 microcontroller introduced, Intel's first 16-bit single-chip computer. 80C51 and 80C49, first CHMOS controllers announced.

Company-wide marketing effort, "Checkmate", implemented as a means to gain design wins for the 286.

27128, Intel's first 128K EPROM introduced

Purchase of 239 acres for a new site expansion in Folsom, California announced.

Intel joins Digital Equipment, Tektronix and twelve other companies in supporting two proposed graphic standards: North American Presentation Level Syntax (NAPLPS) and the Virtual Device Interface (VDI).

First 286 chip samples delivered to customers for evaluation

iPDS™, Intel Personal Development System and the NDS-II, Network Development System introduced

Production begins on 286

82586, local area network communications coprocessor debuts

design center in France, was picked to head up the group.

"The task force was a practical way to signal to everybody that there was something different here," Cornet later recalled. "The 186 (*another new microprocessor, for which the task force also had responsibility*) and the 286 were extremely important to the corporation. We had a lot to win and a lot to lose with them."

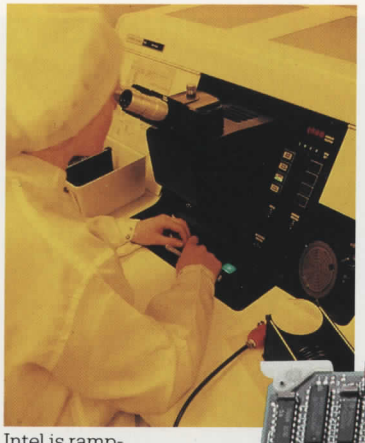
A massive staffing program was undertaken, with 45 people brought in from different areas of the company. They were to work on two fronts—increasing the speed of the 286, and developing a production test program. Moshe Stark, an engineer from Intel in Israel who had just transferred to Santa Clara to learn about marketing, reluctantly agreed to tackle the first, and most difficult problem.

The traditional way of bringing a chip up to speed involves making extensive use of computerized simulators: find a slow set of circuits, re-design them, simulate the new design to see if it works, on and on through the thousands of possible "speed limiters" in the device. Realizing that such an approach would take too long with a chip the size of the 286, Stark needed to come up with a faster, cleaner approach. But what?

"The problem that bugged me was how to solve the speed problem in a systematic way. One way is to use software. But I thought, 'Why not take a real piece of silicon, not just a computer model, and find the problem that way?'

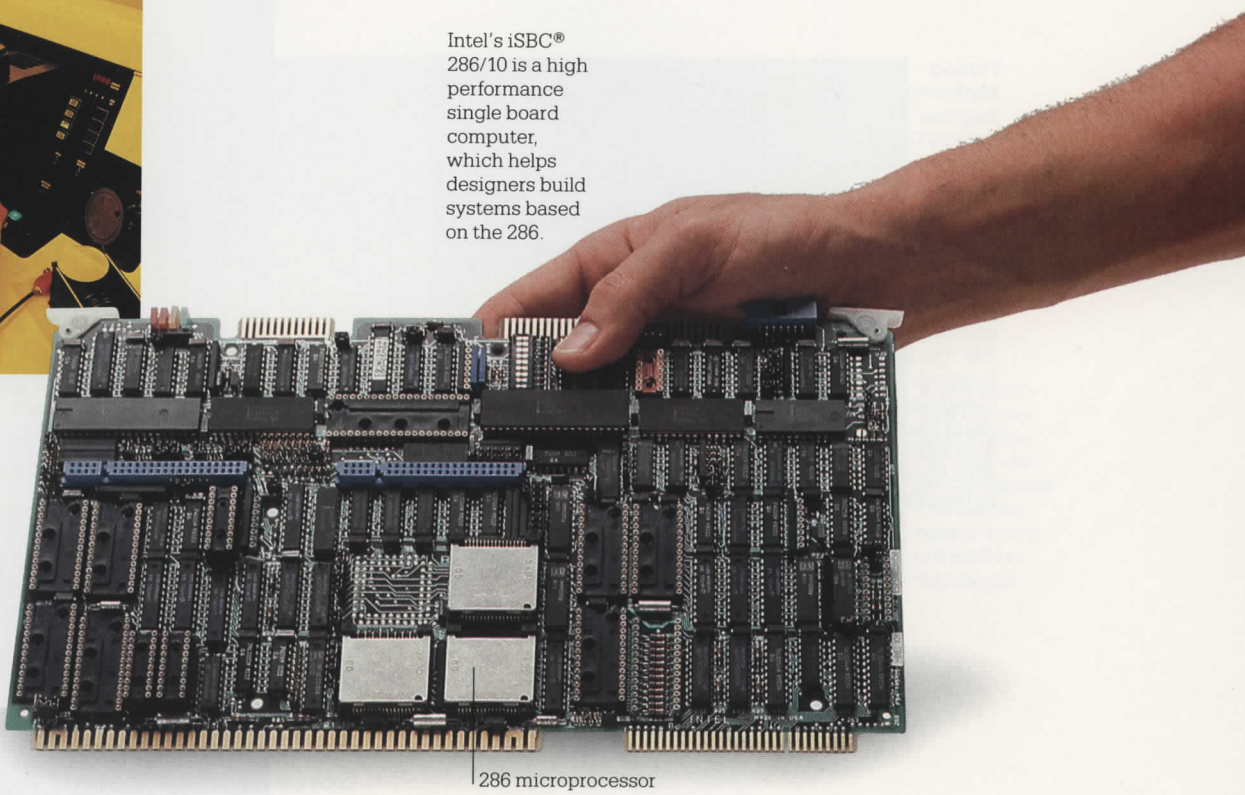
"Chips work in clock cycles, and the device is supposed to do many different things every cycle. If everything is not done, then something won't be in place for the next cycle, and the whole chip will fail.

"We knew that monitoring the device cycle by cycle to the first failure would eventually result in identification of the responsible flow circuit. So Dave Ferguson in my group took this concept and worked day and night to implement a test environment which



Intel is ramping production of the 286 as quickly as possible, and plans to ship millions of the part in 1985. The move into high volume production comes from several factors, including additional wafer fab capacity.

Intel's iSBC® 286/10 is a high performance single board computer, which helps designers build systems based on the 286.



286 microprocessor

Formation of 13-company group to develop the specifications for MULTIBUS II bus architecture

Intel announces world's first four million-bit bubble memory chip

286 Task Force formed to improve yield and fix minor bugs in the chip

1983

286

OTHER PRODUCTS

CORPORATE

CAPACITY/PROCESS

became our main debug tool. It worked non-stop—140 hours a week—it checked millions of clock cycles. No human being could have ever done that."

While Stark and his team were busy speeding up the chip, the rest of the task force was finishing up a testing program. That involved a huge amount of software, since programs needed to be written to take an enormously complex device through its paces, looking for failure points. It also involved building a machine that would simply hold each 286 in place while the test was being administered.

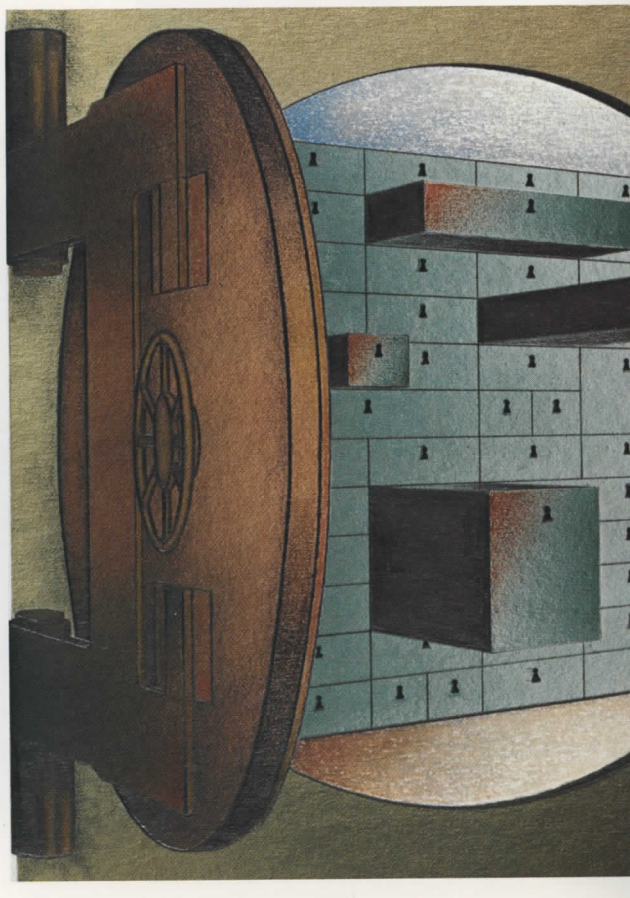
Though microprocessors tend to be the stars of the semiconductor world, they are actually only one part of a complex and interdependent product line. The 286 itself can't function without four other support ICs—a clock chip, a bus controller, an address latch device, and a data transceiver chip. The clock chip and bus controller were being developed in parallel with the 286.

Other products also need to be in place before a processor can be introduced. At Intel's Oregon operation, the company's iRMX operating system was being ported by software engineers so it could run on the 286. Hardware designers were developing the iSBC 286/10 single board computer, so that MULTIBUS customers could take advantage of the 286, as well as the 286/310 microcomputer system. In-circuit emulators and compilers for several programming languages were being readied as development tools for OEMs. And at the Livermore wafer fabrication plant, preparations were made to "ramp up" production for the time when orders would come pouring in.

Finally, the 286 and all of its companion products were in place.

Early in 1982, by way of a seven page press release, the 80286 was formally introduced to the world. At the time, the Motorola 68000 had become popular in the marketplace. For a while, it would be the 286's nemesis.

Product Marketing Engineer Dorothy Cloud, who worked with Intel's field sales force to manage the information exchange between Intel and IBM on the 286. The IBM Personal Computer AT is one of the more than 500 design wins attained by the 286.



Complex testing capability greatly expanded in support of 286 production ramp

I^2ICE—Integrated Instrumentation and In-Circuit Emulator System introduced

82730 text coprocessor introduced

Intel creates the industry's first 256K EPROM and first "production" EPROMs (P2732 and P2764)

2-for-1 stock split announced

XENIX operating system software introduced for the 286*

**XENIX is a trademark of Microsoft, Inc.*

Intel passes latest audit as a manufacturer of JAN (Joint Army-Navy) military microelectronic components. The company has been continuously certified since 1977.

"The 68000 came out after the 8086, and it was having some success in the marketplace," remembered Dennis Carter, who worked on marketing the 286. "But we weren't particularly concerned, because we knew the 186 and 286 were on the horizon. We believed we would announce the 286, and everyone would flock to our door.

"At Intel, we push everything to the utmost... The 286 was a very gutsy thing for the corporation to do. I don't know if people realize how risky it was. It was *very* risky."

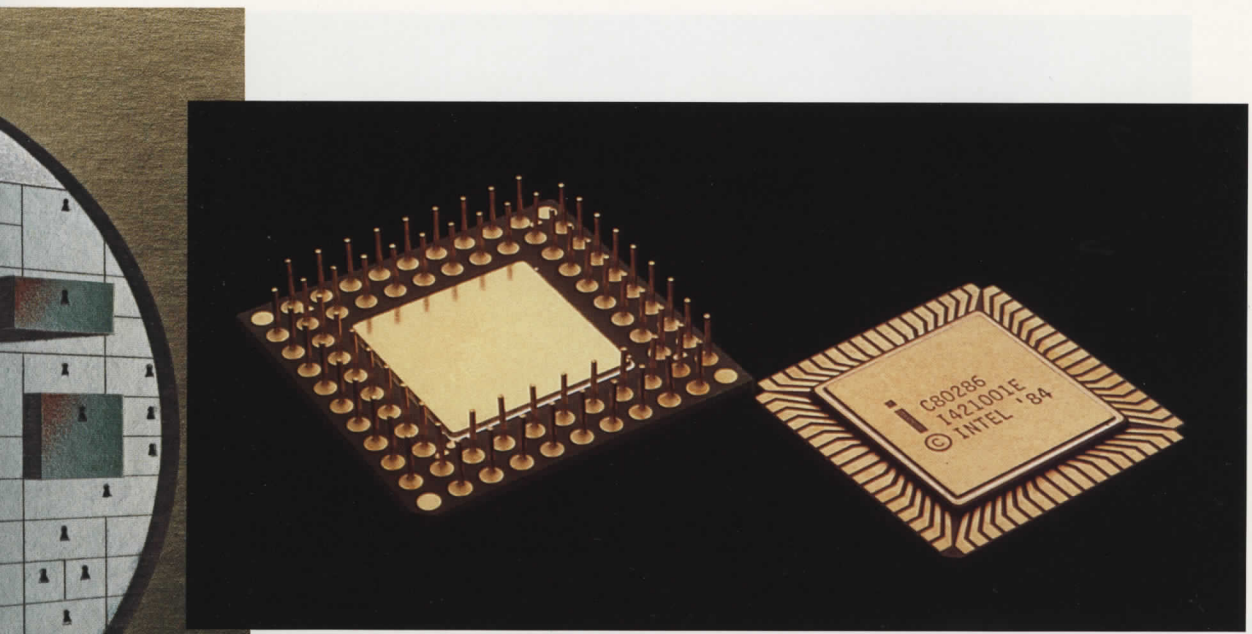
"But when we introduced it, the world perceived the 286 not as a powerful monster machine, but as a slight continuation of the 8086. It also seemed that a lot of start-ups were using Motorola. And that was really scary, because that's one indication of where the future is going to be."

With a major product line at stake, a company-wide marketing effort, called "Checkmate," was put into place in mid-1982. Staff members were pulled from regular duties and assigned to the program full-time, with nearly free rein on time and resources.

The first task before the group was simply deciding what the product's advantages and benefits were for users.

"We realized that just talking about performance wasn't enough," Carter said, "because both sides could quote test results that favored their chip. The key was that we had a lot more than just performance. So we had to focus that message to show customers the other benefits we offered, which were based on our initial visits to companies to get the 286 'wish list' together."

The Checkmate team realized the 286 was going to be used with an entirely new generation of software for multi-tasking systems. Typically, these are complex pieces of software that allow users to move easily from one program to another, just as they



To accommodate the complexity of the 286 chip, the device requires a 68-pin package or is sold in a leadless chip carrier.

Just as a safe deposit box isolates and protects the valuables of each depositor, the 286 has a built-in protection mechanism that is particularly important when there are many users engaged in simultaneous tasks, using the same 286-based system. For example, an accounting clerk can keep his information isolated from the shipping department clerk. The 286 also offers protection by privilege level. An accounting department manager might access service programs to adjust the accounting reports, while the accounting clerk might access only a certain applications program. Programs can be organized into two, three or four levels of protection.

1984

286

OTHER PRODUCTS

CORPORATE

CAPACITY/PROCESS

iSBC 286/10 single-board computer and 286/310 microcomputer system introduced; both use the 286

Intel passes $1 billion annual revenue milestone

Construction begins on Intel's fourth component assembly plant and associated test facility; the first large-scale component assembly operation Intel will have in the U.S.

World's first 64K and 256K CHMOS dynamic RAMs introduced

286 attains more than 500 design wins

move from task to task at a "real" desk.

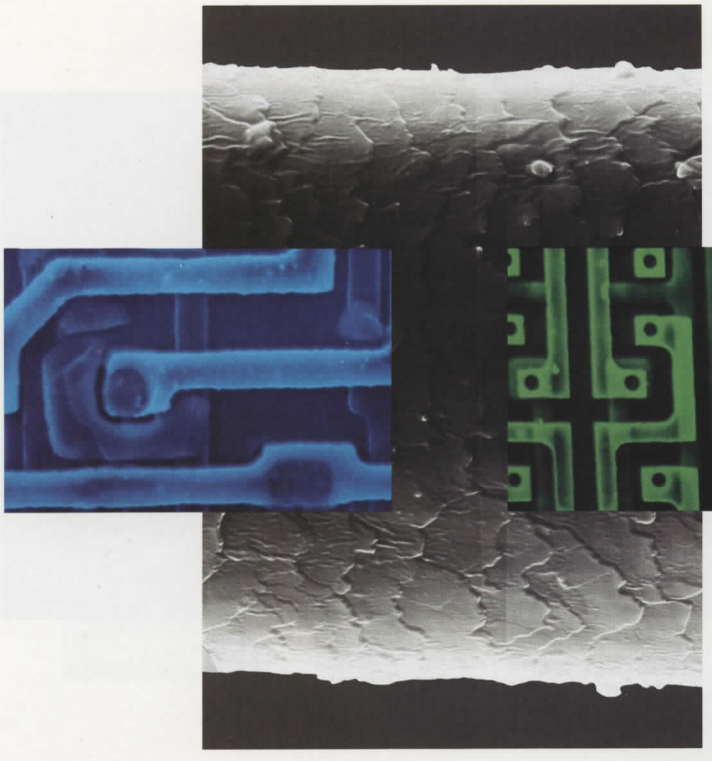
What is needed for these kinds of systems? For starters, they require enormous amounts of memory ... which the virtual memory features of the 286 could handle. And in multi-tasking applications, different parts of memory need to be protected from each other ... something that the protection features of the chip were designed for. A microprocessor used in multi-tasking must be able to switch quickly between programs; special instructions to do just that had been built into the 286. Issue by issue, the original design of the 286 was holding up to the needs of the market.

With a renewed focus on the fundamental advantages of the 286, Checkmate was unleashed. "SWAT" teams were sent into companies that were technological leaders, looking to get the kind of design wins that would set industry standards. At the same time, representatives of both Intel and independent software companies went out to influential magazines and newspapers, telling them the story of multi-tasking and the 286.

The most exhausting part of Checkmate was a series of seminars that were given all around the world. The team put together a day-long presentation, and then would book a date in a city and send invitations to the area's leading design engineers. Three or four Intel representatives, armed with boxes of literature, would arrive and put on the show. The seminar was given more than 200 times, to nearly 20,000 engineers in cities all over the world.

"As a result," Carter said, "the design wins completely turned around. When we went into Checkmate, some market segments were three or four to one in favor of Motorola. By the time we finished, it had turned around the other way."

As the first 286s were moving from Intel's factories to customers, a new team of marketing, design engineering and computer architects was already visiting the design and planning departments of trendsetting users to see what additional capability and



This photo is magnified 1,000 times to compare the line widths used in the 8080 (6 microns), left, and 80286 (1½ microns) microprocessors against a human hair (50 microns). Due to our progress in technology, the line widths have shrunk since we introduced the 8080 in 1974. The 286 was introduced in 1982.

Members of the 386 (32-bit successor to the 286) design team meet in the "war room" to discuss the chip's progress. (Left to right) Jenny Hernandez, Jim Slager, Jan Prak, Gene Hill, John Crawford, Shirley Carter, Dave Vannier, Ken Chong.

286
OTHER PRODUCTS
CORPORATE
CAPACITY/PROCESS

Announcement that Intel will provide chip, board, system and software products in support of the Manufacturing Automation Protocol (MAP) factory networking standard defined by General Motors.

Construction begins on first two buildings in Folsom, California (350,000 sq. ft.)

IBM introduces 286-based PC AT

Intel moves two groups from the Santa Clara area to Chandler, Arizona, and to Folsom, California.

Announcement that Intel will develop a single board computer that will permit data transfer between IBM's 4361 Series mainframe computers and distributed microcomputer-based systems based on Intel's MULTIBUS I bus architecture standard.

Construction begins on Fab IX in Albuquerque—Intel's largest.

features the next generation of microprocessors must have. Clearly it will again be far more capable than its predecessor and will challenge the limits of design and manufacturing technology, even though these limits have been moved dramatically since the conception of the 286.

An observer of the 286 project once said that Intel reminded him of a football team that always took a while to warm up; that whatever it might do in the first half of the game, it can always be counted on to regroup and come back in the second half for a smashing victory. That clearly happened with the 286, as whatever fits and starts there were along the way, the device ended up a resounding triumph.

And there are some people, like Jim Slager, who believe that those fits and starts are actually keys to the company's success.

"At Intel, we push everything to the utmost," he said. "We don't take the easy way out. It's never done. That's one reason we walked into this big project. The 286 was a very gutsy thing for the corporation to do. I don't know if people realize how risky it was. It was *very* risky. It could have failed. There *are* chips that fail—that never get there. Or get there five years later. It could have happened with the 286.

"But the team in the end turned out to be a pretty good team. We knew how to do chips. There were times when we could have blown the whole thing—by making the wrong response to a crisis, by panicking under pressure. But we didn't. We were able to hold together. And it's a great chip. I'm really proud of it. And I'm really proud to be with Intel."

Intel introduces over 70 new products in 1984.

Fab VII comes on stream—Intel's first 6-inch wafer facility.

286 production in 1984 increases 20-fold over 1983

82C03 CHMOS dynamic RAM controller and 29C51 CHMOS codec/filter combination circuits announced. Intel plans to introduce more than 35 new CHMOS products by the end of 1985.

Two Intel facilities held at the "shell" level, awaiting re-expansion in the industry.

Consolidated Statements of Income

Three Years Ended December 31, 1984	1984	1983	1982
(Thousands—except per share amounts)			
NET REVENUES	**$1,629,332**	**$1,121,943**	**$899,812**
Cost of sales	882,738	624,296	541,928
Research and development	180,168	142,295	130,801
Marketing, general and administrative	315,976	216,635	198,640
Operating costs and expenses	1,378,882	983,226	871,369
Operating income	**250,450**	**138,717**	**28,443**
Interest and other	47,699	39,738	1,903
Income before taxes on income	**298,149**	**178,455**	**30,346**
Taxes on income	99,960	62,344	300
NET INCOME	**$ 198,189**	**$ 116,111**	**$ 30,046**
Earnings per capital and capital equivalent share	**$ 1.70**	**$ 1.05**	**$ .32**
Capital shares and equivalents	**116,765**	**110,544**	**92,542**

See accompanying notes.

Consolidated Statements of Shareholders' Equity

	Capital Stock			
Three Years Ended December 31, 1984	Number of shares	Amount	Retained Earnings	Total
(Thousands)				
Balance at December 31, 1981	**87,532**	**$155,577**	**$332,240**	**$ 487,817**
Proceeds from sales of shares through employee stock plans and tax benefit of $7,001	3,192	33,990	—	33,990
Net Income	—	—	30,046	30,046
Balance at December 31, 1982	**90,724**	**189,567**	**362,286**	**551,853**
Proceeds from sales of shares through employee stock plans and tax benefit of $15,351	3,523	56,780	—	56,780
Proceeds from sale of shares	12,500	250,000	—	250,000
Conversion of 7% convertible subordinated debentures	4,954	146,996	—	146,996
Net Income	—	—	116,111	116,111
Balance at December 31, 1983	**111,701**	**643,343**	**478,397**	**1,121,740**
Proceeds from sales of shares through employee stock plans and tax benefit of $3,678	2,044	37,236	—	37,236
Proceeds from sale of shares	87	2,998	—	2,998
Net Income	—	—	198,189	198,189
Balance at December 31, 1984	**113,832**	**$683,577**	**$676,586**	**$1,360,163**

See accompanying notes.

Consolidated Balance Sheets

December 31, 1984 and 1983	1984	1983
(Thousands)		
ASSETS		
Current assets:		
Cash and temporary cash investments	$ 89,412	$ 83,669
Short-term investments (at cost, which approximates market)	141,240	305,408
Accounts receivable, net of allowance for doubtful accounts of $4,725 ($5,342 in 1983)	354,135	303,034
Inventories	219,314	151,903
Prepaid taxes on income	98,518	65,643
Other current assets	55,699	23,674
Total current assets	**958,318**	**933,331**
Property, plant and equipment:		
Land and buildings	362,886	322,987
Machinery and equipment	665,555	438,262
Construction in progress	136,293	39,506
	1,164,734	800,755
LESS Accumulated depreciation	386,452	297,163
Property, plant and equipment, net	**778,282**	**503,592**
Long-term investments (at cost, which approximates market)	**271,747**	**216,652**
Other non-current assets	**21,052**	**26,075**
TOTAL ASSETS	**$2,029,399**	**$1,679,650**
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Short-term debt	$ 65,533	$ 81,082
Accounts payable	79,900	79,139
Deferred income on shipments to distributors	88,413	73,684
Accrued compensation and benefits	33,676	27,655
Profit sharing retirement plan accrual	34,641	2,200
Other accrued liabilities	48,506	43,528
Income taxes payable	39,711	18,262
Total current liabilities	**390,380**	**325,550**
Long-term debt	**146,306**	**127,586**
Deferred taxes on income	**112,690**	**89,318**
Unamortized investment tax credits	**19,860**	**15,456**
Commitments and contingencies	—	—
Shareholders' equity:		
Capital stock, no par value, 200,000 shares authorized, 113,832 issued and outstanding in 1984 (111,701 in 1983)	683,577	643,343
Retained earnings	676,586	478,397
Total shareholders' equity	**1,360,163**	**1,121,740**
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	**$2,029,399**	**$1,679,650**

(Certain 1983 amounts have been reclassified to conform to the 1984 presentation.)

See accompanying notes.

Consolidated Statements of Changes in Financial Position

Three Years Ended December 31, 1984	1984	1983	1982
(Thousands)			
Working capital provided by operations:			
Net income	$ 198,189	$ 116,111	$ 30,046
Charges to income not involving the current use of working capital:			
Depreciation and net retirements	113,755	103,007	82,538
Non-current portion of deferred taxes on income and deferred investment tax credits	27,776	20,065	22,986
Total working capital provided by operations	339,720	239,183	135,570
Working capital provided by:			
Additions to long-term debt	18,720	120,443	47,143
Proceeds from sale of capital stock	2,998	250,000	—
Issuance of stock due to conversion of 7% convertible subordinated debentures, net of issuance costs	—	146,996	—
Proceeds from sales of shares through employee stock plans and tax benefits thereof	37,236	56,780	33,990
Total working capital provided	398,674	813,402	216,703
Working capital used for:			
Additions to property, plant and equipment	388,445	144,974	138,085
Long-term investments and other assets, net	50,072	175,933	61,125
Decrease in long-term debt	—	40,000	—
Conversion of 7% convertible subordinated debentures	—	150,000	—
Total working capital used	438,517	510,907	199,210
Increase (decrease) in working capital	**$ (39,843)**	**$302,495**	**$ 17,493**
Increase (decrease) in working capital by component:			
Cash and temporary cash investments	$ 5,743	$ 49,204	$ 9,578
Short-term investments	(164,168)	254,541	(39,506)
Accounts receivable	51,101	81,818	41,612
Inventories	67,411	30,156	24,295
Prepaid taxes on income	32,875	21,799	5,205
Other current assets	32,025	(32,220)	27,079
Short-term debt	15,549	(5,600)	(43,593)
Accounts payable	(761)	(40,001)	2,562
Deferred income on shipments to distributors	(14,729)	(21,700)	699
Accrued compensation and benefits	(6,021)	(3,206)	(4,311)
Profit sharing retirement plan accrual	(32,441)	(2,200)	—
Other accrued liabilities	(4,978)	(11,834)	(6,127)
Income taxes payable	(21,449)	(18,262)	—
Increase (decrease) in working capital	**(39,843)**	**302,495**	**17,493**
Working capital at beginning of year	607,781	305,286	287,793
Working capital at end of year	**$567,938**	**$607,781**	**$305,286**

(Certain 1983 and 1982 amounts have been reclassified to conform to the 1984 presentation.)

See accompanying notes.

Accounting Policies

Basis of Presentation The consolidated financial statements include the accounts of Intel Corporation and all of its subsidiaries. Effective January 1, 1983, accounts denominated in foreign currencies have been translated in accordance with FASB Statement No. 52, using the U.S. dollar as the functional currency. Prior period financial statements have not been restated.

The adoption of FASB Statement No. 52 did not have a material effect upon the 1983 financial statements. Translation gains included in net income for 1982 (See Interest and Other) resulted from the translation of foreign currencies under FASB Statement No. 8. If the financial statements had been translated under FASB Statement No. 52, the effect on net income as reported for 1982 would have been immaterial.

Inventories Inventories are stated at the lower of cost or market. Cost is on a first-in, first-out basis for materials and purchased parts and is computed on a currently adjusted standard basis (which approximates average or first-in, first-out cost) for work in process and finished goods. Market is based upon estimated realizable value reduced by normal gross margin. Inventories at December 31 are as follows:

(Thousands)	1984	1983
Materials and purchased parts	$ 58,723	$ 38,529
Work in process	86,475	69,846
Finished goods	74,116	43,528
Total	$219,314	$151,903

Property, Plant and Equipment Property, plant and equipment are stated at cost. Depreciation is computed for financial reporting purposes principally by use of the straight-line method over the estimated useful lives of the assets. Accelerated methods of computing depreciation are used for tax purposes.

Deferred Income on Shipments to Distributors Certain of Intel's sales are made to distributors under agreements allowing price protection and right of return on merchandise unsold by the distributors. Because of frequent sales price reductions and rapid technological obsolescence in the industry, Intel defers recognition of such sales until the merchandise is sold by the distributors.

Investment Tax Credits Investment tax credits are accounted for using the deferral method whereby credits are treated as a reduction of the U.S. federal tax provision ratably over the useful lives of the related assets.

Capital Stock Effective June 30, 1983, Intel declared a two-for-one stock split and increased its authorized shares from 75,000,000 to 150,000,000. Shares and per share amounts reported herein have been restated to reflect the effect of this stock split. On March 28, 1984 the shareholders approved an increase in authorized shares from 150,000,000 to 200,000,000.

In 1984 and 1983 the Company sold 86,509 and 12,500,000 shares, respectively, of previously authorized but unissued capital stock to IBM Corporation in accordance with an agreement reached in December 1982. (See Related Party Transactions.)

Earnings Per Capital and Capital Equivalent Share Earnings per share are computed using the weighted average number of outstanding capital shares and capital equivalent shares. Capital equivalent shares include shares issuable under employee stock option plans as determined by the treasury stock method.

Shares of capital stock issued in connection with the 1983 conversion of the 7% convertible subordinated debentures (see Borrowings) have been included in the computation of earnings per share only from the time of conversion since they were previously antidilutive when considering interest on the debentures.

Borrowings

Intel's borrowings are comprised of short-term debt and long-term debt. Short-term debt at December 31, 1984 consists of $65.5 million issued under domestic and foreign lines of credit. At December 31, 1984 Intel had established foreign and domestic lines of credit of approximately $345,000,000. These lines are generally renegotiated on an annual basis. Intel complies with compensating balance requirements related to certain of these lines of credit; however, such requirements are immaterial and do not legally restrict the use of cash. The weighted average interest rate on short-term debt outstanding at December 31, 1984 approximated 11.0%.

Proceeds of $80,000,000 from the Adjustable Rate Industrial Revenue Bonds issued in September, 1983 (the 1983A Bonds) and $30,000,000 issued in December, 1983 (the 1983B Bonds) by the Puerto Rico Industrial, Medical and Environmental Pollution Control Facilities Financing Authority (the Authority) have been loaned to the Company. In accordance with loan agreements between the Company and the Authority, the Company has guaranteed repayment of principal and interest on these Bonds, which are subject to redemption prior to maturity upon the occurrence of certain events. The 1983A Bonds are due September 1, 2013, bear interest at 8% through August 1988 and are adjustable and redeemable (at the option of either the Company or the bondholder) every five years beginning September 1988 through September 2008 in accordance with certain formulas. The 1983B Bonds are due December 1, 2013, bear interest at 7.95% through November 1988 and are adjustable and redeemable (at the option of either the Company or the bondholder) every five years beginning December 1988 through December 2008 in accordance with certain formulas.

In connection with these agreements, the Company is obligated to spend a total of $110,000,000 to finance expansion in Puerto Rico. As of December 31, 1984, the Company had spent $53,100,000. The remainder of the Company's commitment is restricted and invested in interest-bearing securities. (See Investments.) Long-term debt at December 31, 1984 and 1983 includes $110,000,000 of Intel's obligations under these agreements with the Puerto Rico Authority.

The 7% convertible subordinated debentures issued in August 1980 were called on September 14, 1983 for redemption on October 14, 1983. $149,875,000 were converted into 4,954,000 shares of capital stock and the remaining $125,000 were redeemed subject to a premium of 5.95% and accrued interest through October 14, 1983.

The remaining long-term debt represents primarily low-interest borrowings from a foreign government in conjunction with construction in that country and is due at varying dates through 1993.

In January 1985, the Company intends to offer for sale approximately $50,000,000 equivalent Euro-yen bonds at approximately 6⅝% interest, due in 1992.

Interest and Other

(Thousands)	1984	1983	1982
Interest income	$ 57,063	$ 46,256	$ 17,666
Interest expense	(11,336)	(16,177)	(16,136)
Foreign currency gains	4,300	3,497	373
Other income (expense)	(2,328)	6,162	—
Total	$ 47,699	$ 39,738	$ 1,903

Interest expense for 1984, 1983, and 1982 excludes $3,642,000, $573,000, and $1,210,000, respectively, which was capitalized as a component of construction costs. Other income for 1983 includes the gain realized on the sale of assets and the sale of an investment in common stock accounted for under the cost method.

Investments

Investments consist of marketable securities, Eurodollar deposits, and investments under repurchase agreements. Investments with maturities of greater than one fiscal year and restricted investments are classified as long-term. (See Borrowings.)

Taxes on Income

Pretax income and taxes on income consist of the following:

(Thousands)	1984	1983	1982
Pretax income:			
U.S.	$159,535	$ 84,550	$ 3,494
Foreign	138,614	93,905	26,852
Total pretax income	$298,149	$178,455	$ 30,346
Taxes on income:			
Federal			
Current	$ 34,756	$ 20,220	$(24,729)
Deferred (prepaid)	5,865	1,904	12,913
	40,621	22,124	(11,816)
State			
Current	20,718	12,331	730
Deferred (prepaid)	(2,829)	(1,624)	1,091
	17,889	10,707	1,821
Foreign			
Current	38,962	33,503	6,518
Deferred (prepaid)	2,488	(3,990)	3,777
	41,450	29,513	10,295
Total taxes on income	$ 99,960	$ 62,344	$ 300
Effective tax rate	34%	35%	1%

The provision for taxes on income reconciles to the amount computed by applying the statutory Federal rate to earnings before taxes as follows:

(Thousands)	1984	1983	1982
Computed expected tax	$137,149	$82,088	$13,959
State taxes, net of Federal benefits	9,660	5,782	983
Amortization of investment tax credit	(9,177)	(7,772)	(7,244)
Research and experimental credit	(9,796)	(6,431)	(6,253)
Reversal of deferred tax on prior years' DISC income	(19,300)	—	—
Other	(8,576)	(11,323)	(1,145)
Provision for income taxes	$ 99,960	$62,344	$ 300

The reversal of deferred tax on prior years' DISC income is due to the Tax Reform Act of 1984 which provided for the forgiveness of such deferred tax for the years 1972 through 1984.

Deferred (prepaid) income taxes result from differences in the timing of certain revenue and expense items for tax and financial reporting purposes. The sources and tax effects of these differences are as follows:

(Thousands)	1984	1983	1982
Inventory valuation	$(20,150)	$ (6,932)	$ (470)
Distributor sales and other reserves	(6,339)	(16,863)	908
DISC and other undistributed earnings	(6,911)	19,077	8,019
Deferred ITC	4,404	(1,509)	(739)
Depreciation	28,783	8,791	5,971
State and local tax accruals	(2,919)	(1,818)	766
Other, net	8,656	(4,456)	3,326
Deferred (prepaid) income taxes	$ 5,524	$ (3,710)	$17,781

Intel's U.S. income tax returns for the years 1978 through 1982 are presently under examination by the Internal Revenue Service. Management believes that adequate amounts of tax have been provided for any adjustments which may result.

Employee Benefit Plans

Stock Option Plans Intel has stock option plans under which officers and key employees may be granted options to purchase shares of Intel's authorized but unissued capital stock at not less than the fair market value at date of grant. In January 1984, 15,000,000 shares were reserved by the Board of Directors for issuance under the 1984 Stock Option Plan. This plan was approved by the shareholders in March 1984.

Options expire no later than ten years from date of grant. No material charges have been made to income in accounting for options. Proceeds and income tax benefits realized by Intel as a result of transactions in these plans are credited to capital stock. Additional information with respect to employee stock options is as follows:

		Outstanding Options	
(Thousands)	Shares Available For Options	Number of Shares	Aggregate Price
December 31, 1981	6,796	11,100	$108,119
Options granted	(2,090)	2,090	28,116
Options exercised	—	(2,134)	(14,585)
Options cancelled	846	(846)	(14,040)
December 31, 1982	5,552	10,210	$107,610
Options granted	(3,283)	3,283	105,120
Options exercised	—	(2,490)	(20,618)
Options cancelled	759	(759)	(10,269)
Options cancelled under expired plans	(433)	—	—
December 31, 1983	2,595	10,244	$181,843
Additional shares reserved	15,000	—	—
Options granted	(3,164)	3,164	108,727
Options exercised	—	(1,288)	(12,610)
Options cancelled	629	(629)	(13,726)
Options cancelled under expired plans	(60)	—	—
December 31, 1984	15,000	11,491	$264,234
Options exercisable at:			
December 31, 1982		4,040	$ 33,094
December 31, 1983		3,021	$ 29,437
December 31, 1984		1,759	$ 15,207

On December 17, 1984 employees holding options to purchase 5,198,000 shares of Intel capital stock were offered the opportunity to exchange their existing options for the same number of options at the then current market price. This offer was made because management believed that the higher priced options were no longer a motivating factor for key employees and officers. As of December 31, 1984, no exchanges had taken place and, therefore, no effect is reflected in the information provided herein.

The average exercise price for options outstanding at December 31, 1984 was $22.99 while the range of individual exercise prices was $5.00 to $45.13. Individual options outstanding at that date will expire if not exercised at specific dates ranging from January 1985 to December 1994. The range of exercise prices for options exercised during the three year period ended December 31, 1984 was $1.38 to $29.94.

In 1983, 180,000 shares of authorized but previously unissued Intel stock were issued to key employees of one of the company's subsidiaries in connection with a separate stock compensation plan. The fair market value of the Intel stock issued in connection with this plan had previously been charged to income.

Stock Participation Plan Under this plan, qualified employees are entitled to purchase shares of Intel's capital stock at 85% of the fair market value at certain specified dates. Of the 8,000,000 shares authorized to be issued under this plan, as amended, 2,188,000 shares are available for issuance at December 31, 1984. Employees purchased 781,000 shares in 1984 (905,000 and 1,138,000 in 1983 and 1982, respectively) for $22,137,000 ($14,220,000 and $12,301,000 in 1983 and 1982, respectively).

Profit Sharing Retirement Plan Effective July 1, 1979, Intel adopted a profit sharing retirement plan for the benefit of qualified employees. The plan is designed to provide employees with an accumulation of funds at retirement and provides for annual contributions to trust funds based on a formula determined by the Board of Directors. $33,170,000 was accrued for 1984, ($950,000 for 1983 and none for 1982). Effective January 1, 1984, the formula for the Company contribution to the profit sharing retirement plan was amended to provide for mandatory contributions based on a formula determined by the Board of Directors.

Employee annual entitlements vest five years after each plan year or upon retirement and are based upon accumulated fund assets. It is management's intention to fund annual contributions on a current basis.

Effective January 1, 1983, the Company amended the plan to include a Payroll Based Tax Credit Employee Stock Ownership Plan (PASOP) program whereby shares of Company stock are purchased for the benefit of qualified employees based on a percentage of qualified compensation, as defined. Approximately $1,471,000 and $1,250,000 of PASOP accruals were charged to pretax profits in 1984 and 1983, respectively, under this program. Shares credited to employees under this program vest immediately and are subject to withdrawal upon the earlier of termination of employment or 84 months from date of contribution.

Commitments and Contingencies

Intel leases a portion of its capital equipment and certain of its facilities under leases which expire at various dates through 2008. Rental expense was $29,500,000 in 1984, $19,700,000 in 1983, and $18,700,000 in 1982. Minimum rental commitments under all non-cancelable leases with an initial term in excess of one year are payable as follows: 1985—$25,600,000; 1986—$20,200,000; 1987—$14,200,000; 1988—$9,500,000; 1989—$4,800,000; 1990 and beyond—$7,500,000.

Commitments for construction or purchase of property, plant, and equipment approximate $224 million at December 31, 1984. In addition to these commitments, under terms of agreements made with government agencies of a foreign country, Intel has signed agreements to spend an additional $10 million as of December 31, 1984 on construction and equipment for manufacturing facilities within that country. Financial inducements provided to Intel in connection with these agreements include a combination of grants and low-interest loans to fund a major portion of this construction. The agreements provide that all phases of the project be completed in 1985, loans be secured by the facilities, and amounts borrowed be repaid in quarterly installments through 1993.

The Company is a defendant in a lawsuit filed by Hughes Aircraft Corporation (Hughes) in a U.S. Federal Court in August 1983. The suit alleges that the Company willfully infringed and continues to infringe three patents relating to ion implantation. Hughes' complaint seeks unspecified monetary damages and an injunction against further alleged infringement. During October 1984, discussions between the Company and Hughes indicated that the case is likely to go to trial and a July 1985 trial date has been set.

The Company believes it has several meritorious defenses to the lawsuit and intends to contest the lawsuit vigorously. The ultimate outcome of this matter cannot be determined at this time. However, management, including internal counsel, does not believe that the outcome will have a material adverse effect on the Company's financial position or annual results of operations.

Industry Segment Reporting

Intel and its subsidiaries operate in one dominant industry segment and are engaged principally in the design, development, manufacture, and sale of semiconductor components and systems incorporating these components. In 1984, 1983 and 1982, approximately 11.9%, 8.6% and 13.5%, respectively, of Intel's revenues were derived from sales to one significant customer. (See Related Party Transactions.)

Major operations outside the United States include assembly and test facilities which are maintained in Barbados, Malaysia, and the Philippines, and sales subsidiaries throughout Europe and other parts of the world. Summary balance sheet information for operations outside of the United States at December 31 is as follows:

(Thousands)	1984	1983
Total assets	$397,749	$271,562
Total liabilities	143,484	103,794
Net property, plant and equipment	159,846	95,977

Geographic information for the three years ended December 31, 1984 is presented in the tables below. Transfers between geographic areas are accounted for at amounts which are generally above cost and consistent with rules and regulations of governing tax authorities. Such transfers are eliminated in the consolidated financial statements. Operating income by geographic segment does not include an allocation of general corporate expenses. Identifiable assets are those assets that can be directly associated with a particular geographic area. Corporate assets include principally cash, short-term investments, prepaid taxes on income, and other current assets.

(Thousands)	U.S.	Europe	Other	Eliminations	Corporate	Consolidated
1984						
Sales to unaffiliated customers	$1,159,392	$317,947	$151,993	$ —	$ —	$1,629,332
Transfers between geographic areas	310,549	—	107,856	(418,405)	—	—
Net revenues	$1,469,941	$317,947	$259,849	$(418,405)	$ —	$1,629,332
Operating income	$ 259,722	$ 45,477	$ 49,381	$ (12,742)	$ (91,388)	$ 250,450
Identifiable assets	$1,429,541	$143,463	$254,286	$ (97,868)	$299,977	$2,029,399
1983						
Sales to unaffiliated customers	$ 809,035	$208,376	$104,532	$ —	$ —	$1,121,943
Transfers between geographic areas	191,055	—	67,142	(258,197)	—	—
Net revenues	$1,000,090	$208,376	$171,674	$(258,197)	$ —	$1,121,943
Operating income	$ 142,065	$ 35,805	$ 24,475	$ (12,318)	$ (51,310)	$ 138,717
Identifiable assets	$1,072,599	$ 98,783	$172,779	$ (71,149)	$406,638	$1,679,650
1982						
Sales to unaffiliated customers	$ 651,574	$161,807	$ 86,431	$ —	$ —	$ 899,812
Transfers between geographic areas	163,158	—	51,979	(215,137)	—	—
Net revenues	$ 814,732	$161,807	$138,410	$(215,137)	$ —	$ 899,812
Operating Income	$ 57,960	$ 15,997	$ 3,269	$ (4,930)	$ (43,853)	$ 28,443
Identifiable assets	$ 777,217	$ 80,680	$136,402	$ (67,733)	$129,886	$1,056,452

(Certain 1982 and 1983 amounts have been reclassified to conform to the 1984 presentation.)

Related Party Transactions

In February, 1983 International Business Machines Corporation (IBM) became a related party due to its purchase of Intel stock (see Capital Stock). In 1984 and 1983, approximately 11.9% and 8.6%, respectively, of Intel's revenues were derived from sales to IBM. In addition, Intel had purchases from IBM (including lease obligations) of approximately $24 million in 1984 and $12 million in 1983. Amounts receivable from and payable to IBM are immaterial at December 31, 1984 and 1983.

Supplemental Information (unaudited)

Quarterly Information Quarterly information for each of the two years in the period ended December 31, 1984 is presented below.

Inflation Adjusted Information A financial summary which has been adjusted for changing prices to reflect the effects of inflation is presented on page 30.

Report of Certified Public Accountants

The Board of Directors and Shareholders
Intel Corporation

We have examined the accompanying consolidated balance sheets of Intel Corporation at December 31, 1984 and 1983, and the related consolidated statements of income, shareholders' equity and changes in financial position for each of the three years in the period ended December 31, 1984. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the statements mentioned above present fairly the consolidated financial position of Intel Corporation at December 31, 1984 and 1983, and the consolidated results of operations and changes in financial position for each of the three years in the period ended December 31, 1984, in conformity with generally accepted accounting principles applied on a consistent basis during the period.

Arthur Young & Company

San Jose, California
January 12, 1985

Financial Information by Quarter (unaudited)

(Thousands—except per share data)	Quarter Ended			
1984	Dec.31	Sept.30	Jun.30	Mar.31
Net revenues	$416,095	$431,580	$410,087	$371,570
Cost of sales	$265,827	$226,780	$204,089	$186,042
Net income	$ 23,216	$ 70,009[B]	$ 54,686	$ 50,278
Earnings per capital and capital equivalent share	$ .20	$ .60	$ .47	$ .43
Market price range(A) High	$ 31.50	$ 37.25	$ 37.75	$ 42.88
Low	$ 25.25	$ 26.25	$ 28.50	$ 31.50
1983				
Net revenues	$332,414	$292,430	$259,573	$237,526
Cost of sales	$173,865	$156,586	$150,277	$143,568
Net income	$ 47,138[C]	$ 32,129	$ 24,333	$ 12,511
Earnings per capital and capital equivalent share	$ .40	$ .29	$ .22	$ .12
Market price range(A) High	$ 43.38	$ 45.13	$ 37.94	$ 24.13
Low	$ 35.38	$ 36.13	$ 21.81	$ 18.69

(A) Intel's capital stock is traded in the over-the-counter market and is quoted on NASDAQ and in the Wall Street Journal and other newspapers. At December 31, 1984 there were approximately 24,400 holders of capital stock. Intel has never paid cash dividends and has no present plans to do so.
(B) Net income for the quarter ended September 30, 1984 includes the reversal of $19.3 million of deferred tax on prior years' DISC income. (See Taxes on Income)
(C) Net income for the quarter ended December 31, 1983 includes a $3.9 million gain ($6.2 million before taxes) realized on the sale of assets and the sale of an investment accounted for under the cost method.

Financial Summary

(Thousands—except per share amounts)

Ten Years Ended December 31, 1984

	At December 31				Year Ended December 31		
					Working Capital Provided By:		
	Net Investment In Plant & Equip.	Total Assets	Long Term Debt	Share-holders' Equity	Operations	Employee Stock Plans	Working Capital Used for Additions To Plant & Equip.
1984	$778,282	$2,029,399	$146,306	$1,360,163	$339,720	$37,236	$388,445
1983	503,592	1,679,650	127,586	1,121,740	239,183	56,780	144,974
1982	461,625	1,056,452	197,143	551,853	135,570	33,990	138,085
1981	411,747	871,517	150,000	487,817	118,283	27,598	157,426
1980	320,559	767,168	150,000	432,860	157,606	32,930	156,006
1979	217,391	500,093	—	303,189	124,961	19,869	96,681
1978	160,140	356,565	—	205,062	78,025	12,025	104,157
1977	80,117	221,246	—	148,942	49,777	7,766	44,881
1976	51,069	156,568	—	109,460	38,018	10,073	32,073
1975	28,474	102,719	—	74,173	24,232	7,100	11,169

	Year Ended December 31					
					Net Income	
	Net Revenues	Cost Of Sales	Research & Development	Operating Income	Total	Per Share
1984	$1,629,332	$882,738	$180,168	$250,450	$198,189	$1.70
1983	1,121,943	624,296	142,295	138,717	116,111	1.05
1982	899,812	541,928	130,801	28,443	30,046	.32
1981	788,676	458,308	116,496	29,579	27,359	.31
1980	854,561	399,438	96,426	183,120	96,741	1.11
1979	660,984	313,106	66,735	149,169	77,804	.92
1978	399,390	196,376	41,360	85,043	44,314	.54
1977	282,549	143,979	27,921	63,146	31,716	.40
1976	225,979	117,193	20,709	51,457	25,214	.32
1975	136,788	67,649	14,541	33,212	16,274	.21

Management's Discussion and Analysis of the Financial Summary

Results of Operations

Revenues of $1.6 billion in 1984 represent a growth of 45% over the $1.1 billion reached in 1983 and an extension of the growth experienced in 1983 which showed an increase of 25% over 1982. For most of this period, the market for semiconductor devices was strong with demand exceeding supply on many products. This resulted in unusually stable prices accompanying increased unit shipments. In late 1984, however, supply generally caught up with demand and revenues for the fourth quarter dropped below that of the third quarter as customers canceled or delayed delivery of many previously placed orders. This market weakness is continuing into 1985.

Gross profit margins increased to 46% in 1984 from 44% in 1983 and 40% in 1982. However, the gross margin in the fourth quarter of 1984 was 36% as cost of sales grew significantly while revenue decreased. Total 1984 cost of sales grew as we increased capacity to meet the strong demand which characterized the first half of the year. Components of this growth included increased start up expenses for new manufacturing capacity, including facilities, equipment and people. The strong market led to gross margins of approximately 50% for the first half of 1984. As the market weakened in the fourth quarter, the costs of carrying this capacity adversely impacted gross margin. In addition, consistent with our inventory valuation policy, this weakening of demand led us to take significant charges to cost of sales in the fourth quarter.

Operating income increased year to year approximately $110 million for the second year in a row. The Company experienced six quarters of strong growth, which moderated in the third quarter of 1984. Operating income in the fourth quarter of 1984, however, decreased more than $50 million from the third quarter of 1984, due primarily to the gross margin impact noted above. Research and development expenses, although increasing, grew less rapidly than revenue, constituting 14.5%, 12.7% and 11.1%, respectively, of 1982, 1983 and 1984 revenue. Marketing, general and administrative expenses grew at approximately the same rate as revenue.

Net interest and other income increased $8 million over 1983, which was up $38 million over 1982. The increase in 1984 was due to the combined effects of higher average investment balances and lower average borrowings, offset by the nonrecurring gain recorded on the sale of assets in 1983.

The effective tax rate of 34% decreased from the 35% in 1983 (1% in 1982). The 1984 effective tax rate includes the effect of the reversal of deferred tax of $19.3 million on prior years' income of the Company's Domestic International Sales Corporations (DISCs). Without the DISC impact, the higher pretax profits in 1984 over 1983 would have increased the effective tax rate to 40%.

Financial Condition

Intel's financial condition has remained strong. For the first time in its history, the Company has over $2 billion in assets. In addition, the Company has not had to increase its total short-term and long-term debt from 1983 to 1984 and continues to maintain a low debt-to-equity ratio.

Working capital of $568 million represents a decrease of $40 million from 1983. Total cash and investments of $502 million represents a decrease of $103 million from the prior year. These decreases are primarily the result of the Company's investing $388 million in property, plant and equipment in 1984, more than twice the approximately $150 million invested in each of the last several years. The Company also increased its inventory levels by $67 million over the course of 1984. In the fourth quarter, material purchases and factory production levels were reduced, consistent with the weakening market conditions.

Although the Company is heavily impacted by the uncertainty in the current business climate, management feels comfortable with its portfolio of products, its available plant capacity, and its ability to grow quickly when the business outlook improves. With its current levels of working capital, cash and investments, management believes that the Company is in a solid financial position.

In addition to the more than $500 million in total cash and investments, the Company has over $300 million available under foreign and domestic lines of credit. As the Company continues to invest in property, plant and equipment, it expects to be a net user of cash over the short term. While the Company expects its net cash position (total cash and investments less total debt) to remain positive, it plans to increase its borrowings over the next several quarters. These borrowings include an offering of approximately $50,000,000 equivalent Euro-yen bonds, expected to be completed in January 1985. (See Borrowings).

See the following pages for financial summaries and a discussion of the impacts of inflation and changing prices.

Statement of Income Adjusted for Changing Prices

For the Year Ended December 31, 1984 (unaudited)	As Reported in the Primary Statements	Adjusted for Changes in Specific Prices (Current Cost)
(Millions—except per share amounts)		
NET REVENUES	**$1,629.3**	**$1,629.3**
Cost of sales	882.7	889.5
Research and development	180.2	182.0
Marketing, general and administrative	315.9	317.0
Interest and other (income)	(47.7)	(47.7)
Taxes on income	100.0	100.0
NET INCOME	**$ 198.2**	**$ 188.5**
Earnings per capital and capital equivalent share	**$ 1.70**	**$ 1.61**
OTHER ADJUSTED INFORMATION		
Depreciation included in costs and expenses above	$ 100.3	$ 110.0
Purchasing power loss on net monetary items held during year		$ 22.7
Current cost amount of inventory and property, plant and equipment at December 31 (A)		$ 1,086.9
Increase in specific prices of inventories and property, plant and equipment (net) held during the year		$ 32.6
Effect of increase in general price level		$ 46.6
Excess of increase in general price level over increase in specific prices		$ 14.0

(A) Current cost values of net inventories and property, plant and equipment were $221.8 million and $865.1 million, respectively, at December 31, 1984.

Management's Discussion of Adjusted Financial Data

(unaudited)

The Statement of Income and other selected financial data adjusted for changing prices are presented in accordance with the requirements of FASB Statement No. 33, as amended by FASB Statement No. 82. The former pronouncement was experimental in nature and required the presentation of two types of supplemental information, constant dollar and current cost. The latter pronouncement eliminates the requirement for disclosure of certain constant dollar information.

Current cost data is presented here as a supplement to the traditional financial statements. These amounts are computed based on specific indices relevant to Intel's capital assets. The following explanatory comments are provided to assist in understanding the restated data.

Income Statement

Historical operating expenses have been restated into current cost amounts by adjusting their depreciation components. The adjusted depreciation expense is calculated by restating the historical cost of assets acquired in prior years into average 1984 dollars using the relevant index and calculating depreciation thereon using the same methods and estimated useful lives as used in the traditional statements. No adjustments have been made to taxes on income for deferred taxes that might be deemed to arise as a result of differences between income on a current cost basis and income reported for tax purposes.

Five Year Comparison of Selected Financial Data Adjusted for Changing Prices

Five Years Ended December 31, 1984 (unaudited)	1984	1983	1982	1981	1980
(Millions—except per share data)					
Net revenues	$1,629.3	$1,170.0	$967.9	$901.6	$1,078.1
Current cost information:					
Net income	$ 188.5	$ 110.6	$ 24.2	$ 19.4	$ 109.6
Earnings per share	$ 1.61	$ 1.00	$ .27	$ .22	$ 1.25
Net assets at year end	$1,444.8	$1,252.2	$659.3	$631.0	$ 607.2
Excess of increase in general price level over increase in specific prices of inventories and property, plant, and equipment	$ 14.0	$ (19.4)	$ 4.3	$ 11.6	$ 11.5
Purchasing power loss on net monetary items	$ 22.7	$ 12.8	$ 3.4	$ 7.6	$ 4.4
Market price per common share at year end	$ 27.44	$ 42.79	$20.19	$12.50	$ 24.26
Average Consumer Price Index (1967 = 100.0)	311.4*	298.4	289.1	272.4	246.8

Adjusted data on dividends per common share is not presented, because no cash dividends have ever been paid by the company.

*Estimated

Purchasing Power Loss

The economic significance of monetary items (cash, receivables, and obligations of fixed amounts) is related to the general purchasing power of money. During an inflationary period, companies experience purchasing power gains from holding net monetary liabilities and purchasing power losses from holding net monetary assets. As a result of holding net monetary assets, Intel experienced purchasing power losses in 1984 and in each of the four preceding years.

Inventory and Property, Plant and Equipment

The current costs of property, plant and equipment and the depreciation component of inventory have also been computed based on the specific indices mentioned above. No other adjustments have been made to inventories since historical costs approximate current costs. In 1984, the change in the current costs of these assets was impacted more by changes in the general price level than by increases in specific prices.

Five Year Comparison

All data presented for prior years have been restated into average 1984 dollars using the Consumer Price Index for All Urban Consumers (CPI-U).

Summary

The restatement of financial data into current costs requires that numerous assumptions and estimates be made. These financial results should, therefore, be considered in that context and not as precise indicators of the effects of changing prices on the company.

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Vice Chairman, Intel Corporation

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Senior Vice President, Intel Corporation

Andrew S. Grove*
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Form 10-K

If you would like to receive, without charge, a copy of the Corporation's 'Form 10-K' which will be filed with the Securities and Exchange Commission prior to March 30, 1985 for the 1984 year, please send your request to:
F. Thomas Dunlap, Jr., Secretary
Intel Corporation
Mail Stop ST2-1-105
3065 Bowers Ave.
Santa Clara, Ca. 95051.

Annual Meeting

The Intel Annual Meeting of Shareholders will be held March 26, 1985 at The Center For Performing Arts, San Jose, California.

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Certified Public Accountants

Arthur Young & Company
San Jose, California

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